Early Modern English *again*: a corpus study and semantic analysis

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This article investigates uses of the adverb *again* in Early Modern English (EModE) correspondence. The study collects occurrences of *again* and analyses their interpretation. It reveals interesting differences in the use of *again* between EModE and Late Modern English (LModE) as well as Present-day English (PDE). To bring out the grammatical significance of the results, we connect the study methodologically as closely as possible with Beck, Berezovskaya & Pflugfelder's (2009) study of LModE/PDE correspondence. We show that the key diachronic alteration we observe when considering EModE is not just numerical in nature but also qualitatively distinct from the later change at the transition between LModE and PDE. At the heart of our proposal is the finding that while a structural approach to *again* (Rapp & von Stechow 1999; Beck 2005) is successful for characterizing the transition between LModE and PDE, a uniform analysis for the entire diachronic trajectory is not warranted; a combined theoretical modelling is required instead. Specifically, a lexical analysis relying on counterdirectionality (e.g. Fabricius-Hansen 2001) is required to capture the differences in the EModE data.

1 Introduction

This article investigates uses of the adverb *again* in Early Modern English (EModE). We have conducted a corpus study of letters written between the fifteenth and seventeenth centuries on the basis of the *Parsed Corpus of Early English Correspondence* (PCEEC; Taylor *et al.* 2006). The study collects occurrences of *again* and analyses their interpretation. It reveals interesting differences between EModE *again* and uses of *again* in later stages of English (Late Modern English (LModE) and Present-day English (PDE)).

PDE *again* gives rise to a well-known ambiguity illustrated by (1). (1) can be used if the event described by the sentence has occurred before, as in (1′a) (paraphrase and example context provided) – a REPETITIVE reading. (1) can also be used if the opposite has happened before and only the result of the event described is repeated, as in (1′b) (with once more paraphrase and example context) – a so-called RESTITUTIVE or COUNTERDIRECTIONAL reading.

(1) Leo jumped up again.

(1′) (a) Leo jumped up, and he had done that before. (repetitive)
The bell rang, and Leo jumped up. [. . .]
A knock came on the door, and he jumped up again.
(b) Leo jumped up, and he had been up before. (restitutive/counterdirectional)
Leo slowly sat down in his favourite armchair.
A knock came on the door, and he jumped up again.

Competing theories exist for the analysis of the restitutive/counterdirectional interpretation. Some scholars (e.g. Fabricius-Hansen 2001; Jäger & Blutner 2000) analyse the ambiguity as lexical and hence propose in addition to repetitive *again* an *again* that has a counterdirectional meaning. Others (e.g. von Stechow 1996; Beck 2005) argue in favour of an analysis that keeps the meaning of *again* repetitive and analyses the second reading in terms of a different structure. We call them respectively the LEXICAL and the STRUCTURAL analysis of the repetitive–restitutive/counterdirectional ambiguity.

Beck, Berezovskaya & Pflugfelder (2009) found that the phenomenon is subject to diachronic change. In a nutshell, restitutive/counterdirectional *again* was more common in the nineteenth century than it is today, and it occurred with a greater variety of predicates. They argue that their findings speak in favour of the structural analysis. In (2) below, we give the overall frequency of restitutive/counterdirectional *again* according to this study in LModE and PDE, respectively, and exemplify the key difference with predicates that can be easily found on such readings in LModE but are only accepted by some speakers in PDE.

(2) (a) LModE: 21.1 per cent restitutive/counterdirectional *again*
'return again' = come back
'connect again' = put back together
(b) PDE: 12.6 per cent restitutive/counterdirectional *again*
%# return again = come back
%# connect again = put back together

In order to gather their evidence, Beck *et al.* put together two letter corpora, one of letters written in the nineteenth century, and the other one of written utterances (letters, emails, blogs, interviews conducted in writing) written no earlier than 1990. They then searched the corpora for occurrences of *again* and identified their interpretation as either repetitive or restitutive/counterdirectional.

This article uses the same methodology but shifts the focus further into the past. We have utilized a selection of correspondence from the *Parsed Corpus of Early English Correspondence* (PCEEC; Taylor *et al.* 2006). The letters were written between the fifteenth and seventeenth centuries. Like Beck *et al.*, we searched the corpus for occurrences of *again* and identified their interpretation. Our basic finding is summarized in (3): restitutive/counterdirectional *again* was even more common

in EModE than in LModE; moreover, it crucially occurred with predicates that will not permit such an interpretation today, and did not do so in the nineteenth century.

(3) EModE: 41.5 per cent restitutive/counterdirectional *again*
'talk to them again' = reply to them
'write again to him' = write back to him

We argue that the unexpected uses of *again* in EModE speak in favour of the lexical analysis of *again*. This has the interesting consequence that in the course of the development of this adverb, both the lexical and the structural analysis are required. The result is unexpected in that the two analyses of *again* are normally seen as competitors. We will see that they are related through the diachronic development and have to be reconciled over time.

The structure of the article is as follows: section 2 sets the scene by introducing the two semantic analyses of *again*, and by summarizing the Beck *et al.* study. In section 3 we present our EModE data and our interpretation of our results. Section 4 concludes.

2 Background

2.1 Again's *semantics*

We briefly introduce first the lexical analysis of restitutive/counterdirectional *again*, and then the structural analysis (sections 2.1.1 and 2.1.2). A particular type of argument has been put forward in favour of the structural analysis, VISIBILITY, which is important for Beck *et al.* and is reported in section 2.1.3.

2.1.1 The lexical ambiguity theory

Let us take a closer look at our example (1). Its two interpretations according to the lexical ambiguity theory are paraphrased in (1″).

(1) Leo jumped up again.

(1″) (a) (1) presupposes that Leo had jumped up before.
If that is the case, (1) asserts that Leo jumped up. (repetitive)
(b) (1) presupposes that Leo had sat down before.
If that is the case, (1) asserts that Leo jumped up. (counterdirectional)

The derivation of the first reading, the repetitive interpretation, is essentially uncontroversial. The adverb *again* indicates that an event of the kind described by the sentence has happened before, as shown in (4) (interpretations are presented in the style of Heim & Kratzer (1998); 'e′ <e' stands for 'e′ occurred before e'). The analysis of the repetitive reading of (1) is sketched in (5) (we ignore tense and the functional layer of the clause for simplicity).

(4) $[[\text{again}_{\text{rep}}]] = \lambda P.\lambda e{:}\exists e'[e' < e \ \& \ P(e')].P(e)$
'This has happened before.'

(5) (a) [$_{VP}$ [$_{VP}$ Leo jump up] again$_{rep}$]
(b) [[[$_{VP}$ Leo jump up]]] = λe.jump_up(e)(L)
(c) [[[$_{VP}$ [$_{VP}$ Leo jump up] again$_{rep}$]]] =
λe:∃e′[e′<e & jump_up(e′)(L)]. jump_up(e)(L)

The lexical ambiguity analysis claims that the adverb *again* itself is responsible for the ambiguity of (1). In addition to a repetitive interpretation, the adverb has the interpretation in (6) – the so-called counterdirectional reading. The analysis of the counterdirectional reading of (1) is sketched in (7).

(6) [[again$_{ctrdir}$]] = λP.λe:∃e′[e′<e & Pc(e′)].P(e)
'The reverse has happened before.'
(7) (a) [$_{VP}$ [$_{VP}$ Leo jump up] again$_{ctrdir}$]
(b) [[[$_{VP}$ Leo jump up]]] = λe.jump_up(e)(L)
(c) [[[$_{VP}$ [$_{VP}$ Leo jump up] again$_{ctrdir}$]]] =
λe:∃e′[e′<e & sit_down(e′)(L)]. jump_up(e)(L)

The analysis assumes that, given a sentence with predicate P and the word *again*, we can identify the counterdirectional predicate Pc. For example, sitting down would be the reverse (i.e. a counterdirectional event type) of jumping up, and similarly for the pairs *rise/fall*, *open/close*, *pick up/put down* and so on.[1]

2.1.2 The structural ambiguity theory

The structural analysis of the ambiguity illustrated by (1) denies that the adverb *again* is ambiguous. *Again*, according to this analysis, only ever expresses repetition. The two readings of (1) are to be distinguished purely in terms of what is repeated, namely the entire event or its result state. Accomplishment and achievement predicates have a result state that can be restored, hence the ambiguity should exist with those predicates. Activities and states do not have result states and should give rise to repetitive readings only. Corresponding paraphrases of our example (1) are offered below.

(1) Leo jumped up again.
(1‴) (a) (1) presupposes that Leo had jumped up before.
If that is the case, (1) asserts that Leo jumped up. (repetitive)
(b) (1) presupposes that Leo had been up before.
If that is the case, (1) asserts that Leo jumped up. (restitutive)

The idea behind this analysis is that the result state of the event described by the sentence is restored. This can be understood as repetition, provided that we can identify a constituent that denotes the result state that *again$_{rep}$* can modify. This is done by understanding the predicate to be internally complex. In our example, its composition could be as sketched in (8). The VP consists of a constituent that denotes an activity, here *jump*, and a constituent that denotes the result state, here indicated by the particle *up* (von Stechow 1995; Beck 2005). (We use the label XP because the particular name

[1] As an anonymous reviewer rightly observes, the context could have had Leo previously lying down, falling down, being pulled down etc. We simplify the presentation in this respect.

of the label will not matter for the purposes of interpretation; and there are several types of phrases that can express the result state, as discussed in more detail in section 2.1.3.)

(8) [$_{VP}$ Leo jump [$_{XP}$ PRO$_{Leo}$ up]]
'Leo's jumping causes Leo to come to be up.'

The derivation of the repetitive reading attaches *again* to the VP, as shown in (9a), while the derivation of the restitutive reading attaches *again* to the constituent denoting the result state, as indicated in (9b). This analysis requires that there be a result-state-denoting constituent for *again* to modify, or else there cannot be a restitutive reading.

(9) (a) [$_{VP}$ [$_{VP}$ Leo jump [$_{XP}$ PRO$_{Leo}$ up]] again$_{rep}$] (repetitive)
'Once more, Leo's jumping causes Leo to come to be up.'
(b) [$_{VP}$ Leo jump [$_{XP}$ [$_{XP}$ PRO$_{Leo}$ up] again$_{rep}$]] (restitutive)
'Leo's jumping causes Leo to once more be up.'

Notice that the terms 'restitutive' and 'counterdirectional' for the reading in question anticipate the two analyses, in that the former is typically used in the structural analysis and the latter in the lexical analysis. In order not to prejudge the issue, we talk – somewhat clunkily – about the restitutive/counterdirectional reading.

2.1.3 Visibility

The truth conditions that the two competing analyses ascribe to the restitutive/counterdirectional reading are virtually indistinguishable; under both analyses, the situation described by our example (1) on the restitutive/counterdirectional reading can be visualized as in (10).

(10) . . . ./////////////——————————//////////////////////————>
Leo up | Leo not up | Leo up
Leo sit down Leo jump up

Hence the two analyses are more easily evaluated in terms of the predictions they make with respect to when a restitutive/counterdirectional reading should be available. For the lexical analysis, the prerequisites are conceptual: there should be a reversal of direction. Then there can be a counterdirectional predicate. For the structural analysis, the prerequisites are structural: there should be a result-state-denoting constituent. Then this constituent can potentially be targeted by the adverb. Thus, data showing that there are structural prerequisites for the availability of restitutive/counterdirectional *again* support the structural analysis.

Data reflecting so-called VISIBILITY (Rapp & von Stechow 1999) are of this nature. Beck (2005) distinguishes three degrees of visibility that are relevant for modification by adverbs:

(11) The visibility parameter for adverbs (Beck 2005):
An adverb can modify (i) only independent syntactic phrases
(ii) any phrase with a phonetically overt head
(iii) any phrase
The default setting is (i).

To illustrate: in (12a) both VPs are independent syntactic phrases and should generally be modifiable by adverbs. In (12b), while the VP is an independent syntactic phrase, the category we call XP is part of a complex predicate (a verb–particle construction) and not an independent syntactic phrase; see Snyder (2001) and Beck (2005) for our use of the term complex predicate.[2] Examples of complex predicate constructions are given in (13). Only adverbs with at least setting (ii) should be able to modify the XP constituents indicated there (in bold). Finally, (12c) contrasts with (12b) in that the result state of the predicate is not overtly expressed at all. Such predicates are analysed in terms of decomposition in von Stechow (1996) and Rapp & von Stechow (1999) (among many others). Taking the result state in such cases to be an AP, as in (12c), the AP should be visible only to adverbs with setting (iii), which can be called decomposition adverbs. Decomposition is involved in lexical accomplishment predicates like *rise*, *open*, *return* (e.g. Dowty 1979,[3] von Stechow 1995, 1996 and Beck 2005; see Ramchand 2008 for recent discussion relying on an articulate syntactic structure).

(12) (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]]

(13) Complex predicates:
(a) Joe wiped the table **clean**. (resultative)
(b) Joe picked **up** the book. (verb-particle)
(c) Joe gave **Bill the book**. (double object)
(d) Joe swam **to the island**. (goal PP)

To give an example of the relevance of visibility, consider English *almost* vs German *fast* ('almost') (from Rapp & von Stechow 1999). The example in (14) shows that *almost* is an adverb with setting (iii), because the result-state-modifying reading of *almost* is available for decomposition structures (*close*). German *fast* on the other hand has setting (ii): a result-state-modifying reading is possible with complex predicates, as in (15a), but not with decomposition structures, as in (15b). Rapp & von Stechow argue that German *erneut* ('again') shows a behaviour indicative of setting (i), while German *wieder* ('again') has setting (iii). The fact that the syntactic status of the result-state-denoting expression matters speaks in favour of a structural analysis. Since the prerequisites of the lexical analysis are purely conceptual, we would expect no such effects.

(14) Leo almost closed the door.
ok: 'Leo brought it about that the door was almost closed.'

[2] See Elenbaas (2007) for a (narrow-syntactic) diachronic discussion of verb–particle constructions.
[3] While Dowty (1979), as the other authors mentioned, suggests decomposition and observes the ambiguity of *again*, it is fair to note with von Stechow (1995: 81, 84) that Dowty does not offer a syntactic account.

(15) (a) weil Leo den Tisch fast sauber gewischt hat [German]
because Leo the table almost clean wiped has
'because Leo almost wiped the table clean'
ok: 'Leo brought it about that the table was almost clean.'

(b) weil Leo die Tür fast schloss
because Leo the door almost closed
'because Leo almost closed the door'
#: 'Leo brought it about that the door was almost closed.'

We have left out English *again* in our discussion of visibility although it is regarded as a prototypical decomposition adverb, because *again*'s behaviour is precisely the topic of the diachronic study that we turn to next.

2.2 Beck, Berezovskaya & Pflugfelder (2009)

Beck *et al.* (2009) investigate the restitutive/counterdirectional interpretation of *again* in LModE vs PDE. They find evidence of diachronic change in between the two stages of the language and argue that the nature of the change supports the structural analysis of *again*.

2.2.1 Method

The study assembled two corpora. The first one consists of letters written in the nineteenth century. The letters were taken from the Gutenberg Archive and the *Corpus of Late Modern English Prose*. This corpus contains letters written by fifteen speakers of English. The second corpus consists of written utterances from no earlier than 1990. It puts together written utterances by fifteen English speakers as well. From these corpora, Beck *et al.* collected: (i) the overall number of uses of *again*; (ii) the plausibly restitutive/counterdirectional uses of *again*; and (iii) the predicates with which restitutive/counterdirectional *again* was used.

An occurrence of *again* is classified as plausibly restitutive/counterdirectional in this study if one of two circumstances applies to it: either the event presupposed on the restitutive/counterdirectional reading is maximally salient, or it is clear from the context that the repetitive presupposition is not true. (16a) illustrates the first case and (16b) the second.

(16) (a) . . . a gleam of affectionate pleasure lighted it up for an instant, and straight it sunk again. (Edgeworth)
= > 'sink again' refers back to the immediately preceding lighting up.

(b) The first time of going over I shall mark the passages which puzzle me, and then return to them again. (Macaulay)
= > since the speaker goes over the passages for the first time, repetition of 'return to them' is impossible.

(16a, b) are good examples because the local sentence context establishes the criterion for classifying those occurrences of *again* as restitutive/counterdirectional. The same

Table 1. *Nineteenth-century* agains

	No. of *agains*	No. of restitutive *agains*	% of restitutive *agains*
All speakers	1,015	214	6.7–39.0
Average	67.7	14.3	21.1

Table 2. *Lexical accomplishment (LA) predicate + restitutive* again

Speaker	No. of LA predicates + restitutive *again*	Predicates used
Borrow	4	*mount, appear, start*
Bryant	4	*sprout, rise, return*
Byron	7	*return, open, rise, come, leave*
Darwin	2	*change, convert*
Davis	2	*get, disappear*
Dufferin	5	*recommence, descent, close, reach*
Duff-Gordon	0	
Edgeworth	4	*emerge, rouse, sink, faint*
Green	2	*shroud, rise*
Lee	2	*join, return*
Macaulay	2	*return, rise*
Mitchell	2	*raise, start*
Munro	4	*retrace, close, shut, ascend*
Scott	8	*return, recover, revive, raise, cure, awaken, open*
Twain	13	*lose, come, go, get, make, find, reach, change, wake, become*
Total	61 (28.5% of restitutive *agains*)	Total number: 37

Table 3. *LA predicates used with restitutive* again

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

criteria were applied throughout, taking into account the surrounding text where appropriate.

2.2.2 Results

Tables 1–3 summarize Beck *et al.*'s results for the nineteenth-century speakers. Table 2 lists the number of restitutive/counterdirectional *agains* used with lexical accomplishment (i.e. decomposition) predicates and the particular predicates that occur per speaker. In Table 3 we give a list of the lexical decomposition predicates that occur with restitutive/counterdirectional *again* in the nineteenth-century corpus

Table 4. *Modern* again*s*

	No. of *again*s	No. of restitutive *again*s	% of restitutive *again*s
All speakers	995	133	2.3–31.8
Average	66.3	8.9	12.6

Table 5. *LA predicate + restitutive* again

Speaker	No. of LA predicates + restitutive *again*	Predicates used
Barker	1	*open*
Cone	1	*rise*
Dale	2	*start*
Easton	11	*start, grow, come, release*
Hatten	0	
Kleid	0	
Lenhart	0	
Lyle	5	*start, grow*
Mabbet	1	*come*
Mann	0	
McConnell	0	
Ransom	7	*plant, find, cover, rise, fill, grow*
Roberts	2	*come, wet*
Symes	1	*begin*
Wade	3	*start*
Total	34 (25.6% of restitutive *again*s)	Total number: 12

Table 6. *LA predicates used with restitutive* again

begin, come, cover, fill, find, grow, open, plant, release, rise, start, wet
(*start* alone accounts for 13 occurrences, *come* for 6 and *grow* for 5)

altogether. (The notation in the tables contains the label 'restitutive' rather than 'restitutive/counterdirectional' for brevity.)

Tables 4–6 present parallel results for the PDE speakers.

Beck *et al.* observe both a quantitative and a qualitative difference between the two corpora. In terms of numbers, restitutive/counterdirectional *again* used to be more common (average 21.1%) than it is now (average 12.6%). The result is significant: the probability was calculated by a χ^2-test, $p<.01$. The second difference concerns uses of restitutive/counterdirectional *again* with lexical decomposition predicates. There is a relatively small difference in overall numbers: in PDE, 25.6 per cent of the restitutive *again*s occur with such predicates, while it is 28.5 per cent in the nineteenth-century corpus. The difference becomes clearer when we look at individual speakers: a tendency

to lose restitutive *again* with LA predicates emerges for particular speakers in that 14 out of 15 historical, but only 10 out of 15 modern speakers use *again* with LA predicates. It can also be seen quite clearly when we consider the predicates involved: 37 different predicates occur in the historical corpus vs 12 now; three predicates (*start*, *grow*, *come*) account for 24 out of 34 modern LA restitutive *again*s. The small number of predicates is potentially very significant. It is possible for a combination of predicate plus *again* to become more or less idiomatic and even lexicalized. An example that occurs in the modern corpus is (17).

(17) salads of the 'cut-and-come-again' variety

A speaker who uses this term may not be applying a decomposition analysis at all, but simply have learned this term as the name for a type of salad. A reasonable criterion for taking a speaker to have restitutive/counterdirectional *again* with decomposition structures would be that the speaker use restitutive *again* with at least two different LA predicates. Only 4 modern speakers would meet this criterion, while 14 out of 15 historical speakers do.[4] Beck *et al.*'s interpretation is that this is a visibility phenomenon; specifically, that the facts can be analysed in terms of the visibility parameter given in (11) above. They argue that setting (iii) of the Visibility Parameter is available only to a subgroup of the modern speakers, while LModE speakers generally had this setting. This interpretation matches the results of an informal questionnaire study which reveals differences between predicates like *return* vs *come back* (18) or *connect* vs *put together* (19) in PDE:

(18)	(a)	% return again	(restitutive)
	(b)	come back again	(restitutive)
(19)	(a)	% connect the parts again	(restitutive)
	(b)	put the parts together again	(restitutive)

The findings in (18) and (19) indicate that the restitutive/counterdirectional interpretation of *again* is uniformly accepted with the latter but not the former type of predicate. The difference between the two virtually synonymous predicates is that *return* involves decomposition and would require setting (iii) for restitutive/counterdirectional *again* to be possible, while *come back* is a complex predicate, with *back* overtly marking the result state, and needs only setting (ii) for restitutive/counterdirectional *again*.

Note that decomposition as such is still available in PDE. Both (20a) and (20b) have result-state-modifying readings. The observed change concerns *again*, specifically.

(20) (a) I almost reached the summit.
ok: 'I got to a point where I was almost at the summit.'
(b) Can we open the window for a few minutes?
ok: 'Can we bring it about that the window is open for a few minutes?'

[4] The probability of 14 out of 15 historical vs 4 out of 15 modern speakers having restitutive *again* with lexical accomplishment predicates was calculated using a χ^2-test and turned out to be significant, $p<.05$. However, the numbers involved appear to be too small to allow a reliable quantitative analysis of these findings, so that not too much weight can be attributed to this statistical result.

Hence Beck *et al.* conclude that restitutive/counterdirectional use of *again* is beginning to require a visible result state, i.e. *again* in PDE is changing from setting (iii) to setting (ii). Visibility of the result state matters only under the structural analysis. Beck *et al.* therefore also conclude that their findings support the structural analysis.

3 Early Modern English *again*

Beck *et al.* (2009) provide the model for our own empirical investigation. Since *again* has undergone change in the recent past, we ask whether earlier stages of the language may reveal further development. The study reported in this section looks at *again* in EModE. We first describe the database we put together on the basis of the PCEEC corpus. Section 3.1 below contains details concerning our source and selection of data. The findings extracted from that corpus are reported in section 3.2. We will see that they do indicate differences to nineteenth-century and PDE *again*, which are analysed in section 3.3.

3.1 Method

For the sake of comparability, we tried to proceed in as parallel a way as possible to the Beck *et al.* study, beginning with the type of utterance. The data for our investigation have been extracted from the *Parsed Corpus of Early English Correspondence* (PCEEC), available through the Oxford Text Archives (see Taylor *et al.* 2006). The PCEEC contains a total of 84 files with each file containing letters from an edited collection (in a few cases more than a single collection; see Taylor *et al.* 2006 for further philological as well as corpus-related background details). With respect to our current purposes, recall that the study of Beck *et al.* (2009) was conducted on the basis of individual speakers, or writers. Therefore we proceeded as follows also with the EModE data of the PCEEC. Rather than just taking the collections of letters (in each of which several corresponding authors are included), filtering according to individual letter writers was necessary to ensure the largest possible degree of compatibility with the later Modern English study.

We chose letters written between the fifteenth and seventeenth centuries, i.e. the largely EModE span of the corpus. We then extracted all tokens containing relevant forms of the adverb *again* in correspondence written by the fifteen most productive writers. The choice of speakers also followed closely the strategy of Beck *et al.* in focusing on productive speakers: those speakers were picked who had the largest number of uses of *again*. Even so, we ended up with a smaller overall number of *again*s than in Beck *et al.* This was unavoidable if we were to follow the same basic set-up for the study. The historically earliest speaker in our corpus, John Paston II, provides data in his letters from the fifteenth century, so not strictly speaking EModE but still Middle English (ME), more specifically the last subperiod, M4. This gives us a small window into ME, which will prove interesting below. For simplicity, we still refer to the corpus we assembled as the EModE corpus.

We extracted and categorized data in a fashion parallel to the Beck *et al.* study, using the same criteria: number of *again*s, plausibly restitutive/counterdirectional uses, the predicates that occur and so on. All the different spellings of the adverb (*again*, *againe*, *ageyn*, *ageyne*, etc.) were counted, but not prepositions, which are not distinguishable in general by spelling at that time; see the example in (21a), in which the second occurrence is a preposition (i.e. 'against'). Example (21b) illustrates the well-known fact that spelling is not a reliable indicator (the adverb has the same spelling as the preposition in (21a) and the two passages stem from the same writer).

(21) (a) [. . .]þe Duchesse off Suffolk and þe Duke of Norffolk concelle jntend
the duchesse of Suffolk and the duke of Norfolk council intend
verrely thys terme in the begynnyng to comence **a-geyn** the appelys
truly this term in the beginning to commence again the appeals
ageyn me and yow and other off owr seruantys, [. . .]
against me and you and other of our servants
'[T]he Duchesse of Suffolk and the Duke of Norfolk's council intend indeed at the beginning of this term to start again the appeals against me and you and other of our servants.'
(John Paston II, 15th c., PCEEC-PASTON,I,442.137.4242)

(b) and at thys daye many off hys host be passyd þe see in-to Inglond **ageyn**,
and at this day many of his host be passed the sea into England again
and in especiall my lorde off Norffolk and my bretheryn.
and in special my lord of Norfolk and my brothers
'[A]nd on this day many of his host passed the sea back to England again and especially my lord of Norfolk and my brothers.'
(John Paston II, 15th c., PCEEC-PASTON,I,486.154.4754)

3.2 Findings

Table 7 reports the number of *again*s, number and percentage of restitutive/counterdirectional *again*s per speaker; table 8 reports lexical predicates with restitutive/counterdirectional *again* per speaker; and table 9 provides a list of such predicates that showed up overall.

In table 9 there are some predicates whose occurrence is unexpected in the light of the interpretive options of *again* today. Those include in particular *answer*, *hear*, *write*, *talk*. We give some of the relevant examples from the EModE corpus below:

(22) therfore I am reddy in your particular to **answere your love with myne back againe** [. . .]
(John Holles, 17th c., PCEEC-HOLLES,II,203.059.1409)
= 'to return your love'

(23) and doe looke every oure to **hear from him again**.
(Robert Dudley, 16th c., PCEEC-LEYCEST,34.010.261)
= 'to hear back from him'

(24) that lyke as the French King byfore wrote and bosted vn to his mother that he had of his awne mynd passed in to Italy, so is it lykly that she shall haue shortly cause to **wryte agayn to hym** that it had to be mych bettre and more wisedome for hym to abide at home [. . .]

Table 7. *EModE* again*s*

Speaker	No. of *again*s	No. of restitutive *again*s	% of restitutive *again*s
Bacon (16th)	21	11	52.3
Chamberlain (17th)	33	15	45.5
Conway (17th)	23	16	69.6
Cromwell (16th)	21	8	36.3
Dudley (16th)	38	14	36.8
Gardiner (16th)	21	10	47.6
Holles (17th)	40	17	42.5
Knyvett (17th)	42	18	42.8
More, H (17th)	19	6	31.5
More, T (16th)	31	12	38.7
Osborne (17th)	73	27	34.2
Paston, J II (15th)	39	22	56.4
Paston, K (17th)	33	9	27.2
Pepys (17th)	21	5	23.8
Wyatt (16th)	22	10	45.5
Total	477 (av 31.8)	198 (av 13.3)	41.5%

(Thomas More, 16th c., PCEEC-MORE,313.020.266)
= 'to write back to him'

(25) Tis like people that talk in theire sleep,
nothing interupts them but **talking to them again** [. . .]
(Dorothy Osborne, 17th c., PCEEC-OSBORNE,37.017.774)
= 'to reply to them'

It is clear from the context that these *again*s are not repetitive. Their use is more similar to restitutive/counterdirectional *again*. The paraphrases indicated make sense especially in terms of counterdirectionality (e.g. *he writes to her/she writes to him*). But it would not be possible to use *again* in this way in PDE; see e.g. (26). Also, no such predicates occur in the lists in tables 3 and 6 of lexical predicates used with restitutive/counterdirectional *again* in LModE and in PDE.

(26) Please leave a message after the tone. We will call you back/#again.

Once more we have both a quantitative difference and a qualitative difference between this corpus and the later ones. First, the overall number of restitutive/counterdirectional *again*s is proportionally very high: on average 41.5 vs average 21.1 per cent in the nineteenth-century corpus. On the basis of the chi-squared test, the difference between our EModE data and the LModE data is statistically highly significant (χ^2 [1] = 66.7, $p < 0.001$). Furthermore, when testing for the trend in proportions for the three major periods under discussion (i.e. EModE, LModE and PDE), the result obtained is also highly significant (χ^2 [1] = 136.5, $p < 0.001$). Second, the predicates that occur with restitutive/counterdirectional *again* in EModE include some that do not permit such

Table 8. *LA predicate + restitutive again*

Speaker	No. of LA predicates + restitutive *again*	Predicates used
Bacon (16th)	5	*answer, find, hear, imprison*
Chamberlain (17th)	2	*return, begin*
Conway (17th)	5	*confirm, restore, destroy*
Cromwell (16th)	4	*send, have, deliver, bring*
Dudley (16th)	6	*hear, repay, pay, get, bring, win*
Gardiner (16th)	4	*remit, repay, forge, light*
Holles (16th)	1	*raise*
Knyvett (17th)	3	*come, obtain, recover*
More, H (17th)	3	*take, write*
More, T (16th)	2	*find, write*
Osborne (17th)	11	*talk, begin, find, send, enter, meet, spoil, rise, take*
Paston, J II (15th)	7	*come, commence, pay, receive, close,*
Paston, K (17th)	2	*return, furnish*
Pepys (17th)	2	*anchor, embrace*
Wyatt (16th)	2	*dispatch, remember*
Total	59 (28.5% of restitutive *again*s)	Total: 39

Table 9. *LA predicates used with restitutive/counterdirectional* again

anchor, answer, begin, bring, close, come, commence, confirm, deliver, destroy, dispatch, embrace, enter, find, forge, furnish, get, have, hear, imprison, light, meet, obtain, pay, raise, receive, recover, remember, remit, repay, return, restore, rise, send, spoil, take, talk, win, write

Table 10. *EModE* again*s*

Period	No. of *again*s	No. of restitutive *again*s	% of restitutive *again*s
E1 with Paston	155	73	47.06 %
E1	116	51	43.9 %
E2	186	73	39.2 %
E3	136	52	38.2 %

a use later. We take these findings to be indicative of a diachronic change between EModE and LModE.

Since our current corpus contains instances of *again* spread over more than two centuries, it is legitimate to ask whether there is any internal development within this period. Using the standard Helsinki threefold subdivision of the Early Modern English period, we give the results for our material in table 10. The speakers are usually within one period (we counted Thomas Knyvett as belonging to E2 since most of his letters

are situated in this subperiod). For the first subdivision, we give the figures both with and without John Paston II (who belongs to the late Middle English period M4 and not to E1).

A decreasing tendency can be observed descriptively in the figures presented in table 10 within the span of the EModE correspondence data, but the numbers here are clearly a lot more stable than compared to Late Modern English (see Beck *et al.* 2009 and section 3.3 below). The tendency, internal to the EModE period, is not statistically significant, according to the chi-squared test ($p = 0.5$). Applying the test for the trend in proportions also yields a non-significant result ($p = 0.3$). To summarize so far, there is a significant difference between the incidence of counterdirectional/restitutive *again* in EModE and LModE, on which the main claim of this article is based, while the EModE period itself does not show a statistically significant internal development. An analysis of the developments is given in section 3.3.

3.3 Discussion

3.3.1 EModE: the presence of counterdirectional again

We propose that the uses of *again* in (27a–d) are plausibly seen as counterdirectional rather than as restitutive.

(27) Uses of *again* suggestive of counterdirectional semantics:
- (a) to talk to them again = to reply to them
- (b) to write again to him = to write back to him
- (c) to answer your love with mine back again = to return your love
- (d) to hear from him again = to hear back from him

A first point to note is that some predicates used with *again* in EModE, like *talk*, are most plausibly seen as activities. The results of applying the usual criteria (see Dowty 1972; Verkuyl 1972) are given in (28b, c). It is hard to see these predicates as introducing a result state. But if there is no result state, such a state cannot be restored – ruling out a restitutive analysis of *again*. On the other hand, we can intuitively easily see the activity described as directed (29).

(28) No change of state:
- (a) Lizzy talked to Darcy.
- (b) Lizzy talked to Darcy for an hour / #in an hour.
- (c) Lizzy was talking to Darcy. => Lizzy talked to Darcy.

(29) Counterdirectionality:
x talk to y / y talk to x

Other predicates can reasonably be described in terms of a decomposition into an activity and a result state, like *write* and *answer*. However, a plausible decomposition introduces a result state that does not really capture the intuitive interpretation of the uses of *again* in (30a, b). The intuitive interpretations do indicate a reversal of direction.

(30) 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 to him again. ≠
Her writing caused a message to him to once more come into existence.

(b) I answer your love with mine.
possible result: I love you (you have my love).
I answer your love with mine back again. ≠ I once more love you.

Pending a clearer understanding of and a more precise semantics for counterdirectionality, we assume that the intuition of a reversal of direction can be formalized, i.e. that such a semantics can be developed. We conclude that the data in (27) can be captured by a counterdirectional analysis of *again*, but not by a structural analysis. It is interesting that there are, after all, predicates that reveal an interpretive difference between the lexical and the structural analysis and that it took diachronic data to identify them. We conclude that EModE has counterdirectional *again*.

3.3.2 The change from counterdirectional to restitutive again

How do we reconcile counterdirectional EModE *again* with the structural analysis of *again* that Beck *et al.* (2009) argued for? (41) summarizes what we know from the two correspondence studies.

(31) (a) EModE has counterdirectional *again*.
(b) LModE does not have counterdirectional *again*.
=> counterdirectional *again* is lost between the seventeenth and nineteenth centuries.

Let us consider the restitutive/counterdirectional reading of an example like (32):

(32) nothing can ever perswade mee to **enter the worlde againe** [. . .]
(Dorothy Osborne, 17th c., PCEEC-OSBORNE,123.052.2815)

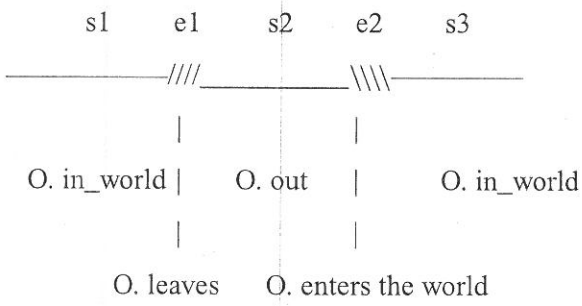
The example is from a letter written by Dorothy Osborne to William Temple. Although Osborne and Temple later married, the relationship was facing difficulties at the time of this piece of correspondence. Preceding the letter, Osborne had decided to end their secret engagement and Temple had in turn reproached her; see Harding (1976: 144), who regards the letter from which (32) is taken as 'written in great depression'. Osborne breaks the linear narrative style here and she writes about distancing herself from the world in the passage. We ignore the embedding material contained in the original example (the matrix clause with the negative quantifier and the verb 'persuade') and concentrate on the subordinate clause with *enter the world againe*.

We claim that in such examples in the history of the English language, two different analyses ought to be considered, one in terms of counterdirectionality and the other in terms of restitution, shown in (33) and (34). On both readings, Osborne enters the world in the event e. The fact that this happens 'again', i.e. there was a previous relevant event is captured through the presupposition (cf. the notation $\exists e'.e' < e$, i.e. there is an event e' preceding e). The two analyses yield truth conditions that for this type of example are indistinguishable. They both describe situations with the properties sketched in (35) (as noted above for the parallel example (1)).

(33) Counterdirectional analysis:
  (a) [[$PRO_{Osborne}$ [enter the world]] $again_{ctrdir}$]
  (b) λe: ∃e′[e′<e & O. leave_the_world(e′)]. O. enter_the_world(e)]

(34) Structural analysis:
  (a) [[$PRO_{Osborne}$ [$Ø_V$ [[$_{SC}$ $PRO_{Osborne}$ in the world] $again_{rep}$]]
  (b) λe: ∃e′[e′<e & O. in_the_world(e′)].
  O. does something that causes her to come to be in_the_world (e)

(35)



When do these respective analyses apply? We have evidence that counterdirectional *again* is older than repetitive *again*. It comes from the steady decrease in the percentage of *again*s used restitutively/counterdirectionally, and the corresponding rise in repetitive *again*. Between the EModE and LModE corpora, restitutive/counterdirectional *again* drops from 41.5 to 21.1 per cent. Within the EModE corpus, we observe that John Paston II, our earliest speaker historically, uses mostly restitutive/counterdirectional *again*s, namely at a rate of 56.4 per cent.

Since we know that LModE no longer has counterdirectional *again*, a process of language change needs to be posited that will get us from the counterdirectional analysis in (33) to the restitutive analysis in (34). The restitutive analysis in (34) has two prerequisites: on the one hand, a speaker has to have repetitive *again*, and on the other, s/he has to have access to decomposition structures.

We can confirm that the latter has to be the case in EModE. There are other adverbials that are decomposition adverbials (*almost*, *for an hour* etc.), hence decomposition is a process that plays a role in the grammar of the language. We give some relevant examples below involving temporal adverbs and *almost* in conjunction with the perfect of result.

(36) Vppon thys I was commaunded to go forth **for a whyle**
(Thomas More, 16th c., PCEEC-MORE,553.042.796)

(37) Sir, my lord of Hunsdon hath sent his comandment, uppon his sonn Hobbyes informacion, for a bayly of Hersam, who had a book concerning ther own lybertyes and myne also, delyvered them by a stuard of myne only **for a tyme** to pleasure them [. . .]
(Robert Dudley, 16th c., PCEEC-LEYCEST,11.005.86)

(38) Indeed, sweet hart, this busines hath **almost** broake my hart.
(Thomas Knyvett, 16th /17th c., PCEEC-KNYVETT,161.042.1784)

While the example in (36) wears the event interpretation on its sleeves, i.e. overtly via the particle *forth*, the one in (37) interestingly requires decomposition at the level of interpretation, as does (38). In the latter, Thomas Knyvett is not quite entirely

demolished given that, as he puts it in the very next sentence, 'I am gladd to reade some comfort in thy letters'. At the same time, the sentence is not counterfactual (so that, say, he in fact managed to escape the inconvenient situation entirely) – we are told in the same token: 'yet when I looke backe vpon my owne condition, I am struck blancke againe, seeing my selfe inviron'd with eyes & eares that seek's my vtter ruine'. Hence we clearly have a result-state-modifying reading of *almost* with a lexical accomplishment predicate ('this business has caused my heart to come to be almost broken').

We can also confirm that English must have a repetitive use of *again* during the ME period. Below is a pair of examples from John Paston II (a late representative of the ME period), the first of which is a counterdirectional use of *again* and the second of which must be repetitive (since *be in London* is purely a state). Roughly 40 per cent of John Paston II's *again*s are repetitive.

(39) John Paston II (15th c.):
counterdirectional: tyll that the Kyng goo in-to Walys an **kome ageyn** [. . .]
(PCEEC-PASTON,I,391.126.3877)
repetitive: I woll not fayle to **be there at London ageyn** wyth-in thys vj dayes
(PCEEC-PASTON,I,443.137.4269)

Thus an EModE speaker has all the grammatical knowledge required to employ the restitutive analysis in (34). We speculate that at some point speakers reanalysed (33) to (34). Note that this is a plausible step to take because the resulting interpretations describe the same situations, a point discussed in terms of 'constant entailments' in Beck (2012); see also the discussion in section 4 below.

In sum, EModE *enter the world again* is likely to be vacuously ambiguous, reflecting both the older counterdirectional source and the modern decompositional use of repetitive *again*. By contrast, a predicate like *enter the world again* in LModE is restitutive: it has repetitive *again* and decomposition. By the nineteenth century, the restitutive analysis (34) is the only option.

3.3.3 Further issues

The trajectory that we have sketched for *again* opens some interesting questions for further research. *Again* must have gone through a series of changes. These begin with the change from preposition to counterdirectional adverb in early ME. The counterdirectional adverb then acquires a repetitive reading in addition during the ME period. Repetitive *again* has setting (iii). Counterdirectional *again* is lost, before LModE. The setting of repetitive *again* switches to setting (ii) in PDE. On this view, the change of *again* is not a monolithic one, but rather a sequence of changes that are rather distinct in nature. The numerical developments we have noted give some support to this view.

The developmental trajectory which is observed in the corpora consisting of individual speakers cannot be one and the same change from the Middle English period to PDE. A uniform change from Middle English to PDE (say, with a possible death of restitutive readings in the future in the completion of an idealized curve of

change) would face two problems: (i) semantic implausibility (no plausible result state for many counterdirectional predicates preceding LModE; see above); (ii) a falsified prediction if we assumed that it were a purely structural change following the S-shaped curve in its progress (see Kroch 1989). Under the latter assumption, at the centred span of the change, we would expect the most dynamic development. The curve would only be expected to be slow in the rate of change at its endpoints. But the EModE period is not at the beginning or the end of the development between Early Middle English and PDE. Consequently, the observed stability in the rate of restitutive readings *during* the EModE period, which is not at an extremity of the assumed single development, would not be expected on the simplest assumptions.

4 Conclusion and questions for further research

The main claim in this article has been that both a counterdirectional analysis and a restitutive analysis of *again* are required in order to track its historical development. While the structural analysis could capture the transition from LModE to PDE, the counterdirectional analysis is required for earlier English.

We end the article with some questions for further research. The overall picture calls for an analysis of the individual steps involved in the changes that *again* went through:

Q1: The adverb *again* can be traced back to a preposition meaning *against*.
How does counterdirectional adverbial *again* develop from the preposition?
Q2: The repetitive use of *again* develops from the counterdirectional use. How are they related? Does the development happen via the reanalysis of lexical decomposition structures with counterdirectional *again*?
Q3: a. How is counterdirectional *again* lost?
b: How and why does PDE lose setting (iii) for *again*?

We see that a more comprehensive survey of the behaviour of *again* will be needed, as well as a detailed semantic investigation of its various stages. A detailed semantic analysis should build on the path-related preposition *against* (Cresswell 1978; Krifka 1998). Its connection to counterdirectional *again* will give us more evidence on the nature of counterdirectionality. There is also a more general theoretical issue alluded to above:

Q4: Is the concept of constant entailments a useful guideline for meaning change?

Following Beck (2012), constant entailments are defined as follows:

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

Crucially, different analyses can lead to identity in the overall sentence meanings. Supposing that we can take constant entailment as a guideline for the possibility of change, we can pin down the rise of repetitive *again* in the way envisioned above. The notion of constant entailment is distinct from that of bridging contexts in the sense of

Evans & Wilkins (2000) or Heine (2002).[5] While we do not deny the role of implicatures turning into core meanings (see also Eckardt's (2006, 2012) *Avoid Pragmatic Overload* principle in order to motivate change in the framework of compositional semantics), the change we have described in this article is of a different type (see Beck 2012). It is not in any obvious way primarily rooted in the conventionalization of implicatures. What is rather the case is that sentences containing *again* that are *truth-conditionally* indistinguishable at some point, i.e. between the counterdirectional and the restitutive reading, lose one of the two potential representations along the path of change. We hope to address some of the issues presented here with the tools of a formalized system in future work.

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[5] Constant entailments may seem to be close to Diewald's (2002: 103) 'critical context', which is 'characterized by multiple structural and semantic ambiguities and thus invites several alternative interpretations, among them the new grammatical meaning'. However, Diewald (2002: 118, note 2) clarifies that the ambiguity of her critical contexts is still related to the role of conversational implicatures.

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