The Use of *Again* in 19th-Century English versus Present-Day English

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Abstract. The central claim of this paper is that the use of the adverb *again* has changed between 19th-century English and present-day English. In particular, restitutive uses were more easily and generally available in the 19th century than they are now. This diachronic change provides evidence for a lexical parameter governing the behavior of adverbs at the syntax/semantics interface. The parameter relates surface form to possible interpretations and thus introduces an interesting notion of visibility into linguistic theory.

1. Introduction

The example in (1) illustrates the basic semantic contribution of *again*: *again* indicates repetition.

(1)   John sneezed again.
      John sneezed, and that had happened before.   (repetitive)

In (1), the truth conditional contribution is that John sneezed; the other meaning component, that that had happened before, is a presupposition. Thus (1) is only appropriate in a context in which it is established that John had sneezed before. Then it asserts that John sneezed. Although a repetitive interpretation is the only possibility in (1), which involves an activity predicate, things change once we look at accomplishment and achievement predicates (in the Vendler/Dowty classification; Dowty 1979) as in (2). Many speakers, including Dowty, perceive an ambiguity in (2) that is described informally in (2′).

(2)   Sally opened the door again.

(2′)   a.   Sally opened the door, and that had happened before.   (repetitive)
       b.   Sally opened the door, and the door had been
            open before.   (restitutive)

The two readings differ in terms of their presuppositions. Whereas the repetitive reading presupposes that the entire action described by the sentence is repeated, the restitutive reading presupposes that the result state of that action is repeated—that is, it had held before (cf. McCawley 1968, Dowty 1979, von Stechow 1996, Fabricius-Hansen 2001, Klein 2001, among many others). For the repetitive reading to be appropriate, the context has to establish that Sally had opened the door before. For the

restitutive reading, the context has to establish that the door had been open before.

However, although restitutive readings like the one in (2) are well attested (compare, for instance, (3)) and have received much attention in the linguistic literature, they are not in fact accepted by all present-day English (PDE) speakers. We conducted a small survey in which native speakers were asked to provide an acceptability judgement on (3′) in a context in which only the restitutive presupposition held (see section 3.3 for more details). If a speaker judged the sentence acceptable in this context, this means that s/he gets a restitutive reading for the example. Our data collection revealed that native speakers divide into two groups—one that accepts and one that does not accept this reading for examples like (3′). A similar observation holds for (4) and (4′).

(3) a. And away she went; but returning again in a moment,…
         (*Sense and Sensibility*, Jane Austen)
     b. 'return again' is appropriate because there is a previous time
         at which she was there (namely, the time before she went
         away)   (restitutive)

(3′) %She returned again.   (restitutive)

(4) a. Jack opened his lips to speak, but shut them again,…
         (*Jack and Jill*, Louisa May Alcott)
     b. 'shut them again' is appropriate because there is a previous time
         at which Jack's lips were shut (namely, the beginning of the
         opening)   (restitutive)

(4′) %Sally opened the door again.   (restitutive)

We asked ourselves why there was this mismatch between attested data and reported intuitions. Our answer is that English is undergoing a change in the possibilities for the appropriate use of *again*.

Section 2 introduces a compositional semantic analysis of restitutive *again*. In section 3, we present a corpus study conducted to examine 19th-century versus present-day English uses of *again*. Our findings are compared, and conclusions drawn, in section 4.

2. Restitutive *Again*

This section introduces the semantic analysis of *again* that will be the foundation of our analysis of the diachronic change in its use in English over the last century. Subsection 2.1 presents von Stechow's (1996) analysis of restitutive *again* with predicates like 'open the door'. Different kinds of predicates play a role in the nature of the change that is taking place in English. Hence subsection 2.2 introduces von Stechow's analysis of restitutive

again with what we call complex predicate constructions. The two kinds of predicates are distinguished at the syntax/semantics interface; their differences with respect to *again* are the topic of subsection 2.3.

2.1   A Structural Analysis: von Stechow (1995, 1996)

Let us take a closer look at the ambiguity of (2) observed earlier.

(2)   Sally opened the door again.

(2′)   a.   Sally opened the door, and that had happened before.   (repetitive)
       b.   Sally opened the door, and the door had been open   (restitutive)
            before.

We first examine the repetitive interpretation, which will provide us with an understanding of the basic contribution of the adverb *again*. We will take *again* to operate on a predicate of events; the sister of *again* in example (2), (5a), would thus roughly have the interpretation in (5b).

(5)   a.   Sally opened the door.
      b. $\lambda e.\text{open}_e(\text{the\_door})(\text{Sally})$
           the set of events that are openings of the door by Sally

This set of events is modified by the adverb, which has the semantics in (7) (cf. von Stechow 1995, 1996, among many others; the semantics in (7) is simplified but will suffice for our purposes). The lexical entry captures the fact that the requirement that there be an earlier event of the same kind is a presupposition by making this a definedness condition.

(6) $\lambda e'.\text{again}_{e'} \, (\lambda e.\text{open}_e(\text{the\_door})(\text{Sally}))$

(7) $[\![\text{again}]\!] \, (P_{<i,t>})(e)$ $= 1$ iff $P(e) \, \& \, \exists e' \, [e'<e \, \& \, P(e')]$
                              $= 0$ iff $\sim P(e) \, \& \, \exists e' \, [e'<e \, \& \, P(e')]$
                              undefined otherwise.

The resulting interpretation is described informally in (8) and provides an appropriate characterization of the repetitive reading of example (2).

(8)   'Sally opened the door again'
          is true of an event if that event is an opening of the door by Sally,
              and there was an earlier event that was an opening of the door by Sally;
          is false of an event if that event is not an opening of the door by Sally,
              and there was an earlier event that was an opening of the door by Sally;
          undefined otherwise.

The problem posed by the restitutive reading is that the predicate of events that *again* should modify is (10); however, the surface structure of the sentence does not suggest the presence of a constituent with that interpretation.

(9) a. Sally opened the door again.
  b. Sally opened the door, and the door had been open   (restitutive) before.

(10) $\lambda e.\text{open}_e(\text{the\_door})$
   the set of eventualities that are states of the door being open

A prominent type of solution to this problem (McCawley 1968; von Stechow 1995, 1996) is to decompose the lexical verb *open* into the adjective *open* and a CAUSE BECOME meaning component. We use von Stechow's theory, which is applied to the examples in (12)–(14).

(11) $\text{open}_{TV} = \text{open}_{Adj} + \text{BECOME} + \text{CAUSE}$

(12) a. Sally opened the door.

underlying structure   surface structure
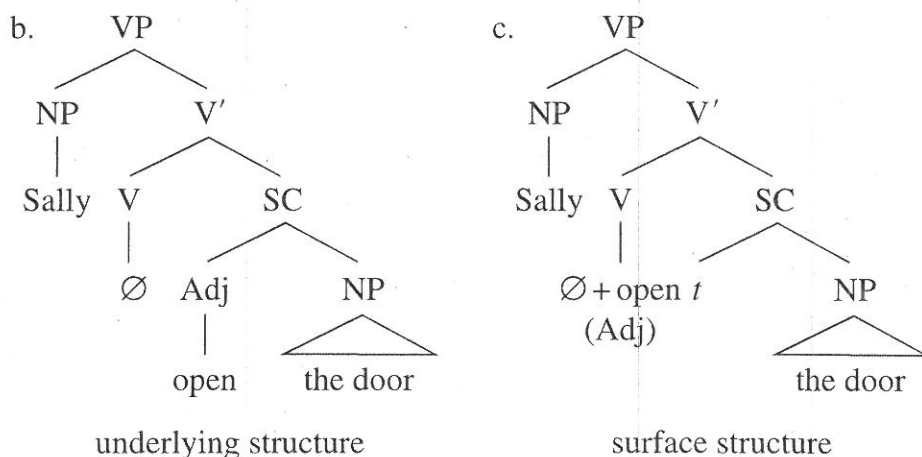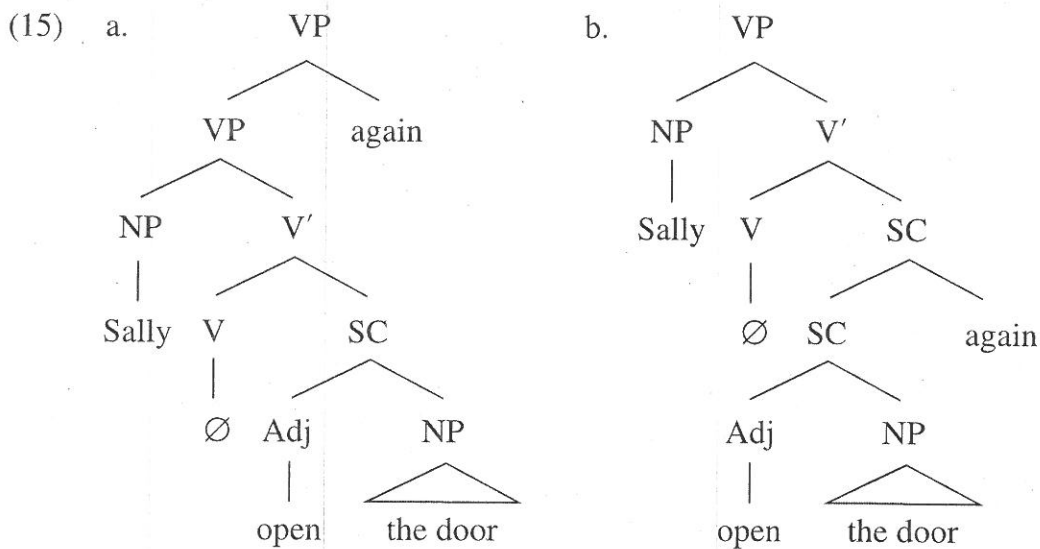
(13) $[\varnothing_V] \rightarrow \lambda p.\lambda x.\lambda e.\exists P[P_e(x) \ \& \ \exists e' \ [\text{BECOME}_{e'} \ (p) \ \& \ \text{CAUSE}(e')(e)]$
   'x does something in e that causes an event of p coming to be'

(14) a. $\lambda e.\exists P[P_e(\text{Sally}) \ \& \ \exists e' \ [\text{BECOME}_{e'} \ (\lambda e^*.\text{open}_{e^*}(\text{the\_door})) \ \& \ \text{CAUSE}(e')(e)]]$
   b. There was an action of Sally's that caused the door to become open.

According to this analysis, lexical decomposition of the verb *open* is reflected in the syntactic structure. The underlying structure for the example contains a small clause constituent contributing 'the door is open'—the result state of the

accomplishment predicate. A phonologically empty verb links the subject and the result state through a CAUSE BECOME meaning component. The resulting truth conditions are described in (14b). The important feature of this theory is that now we have a syntactic constituent that can serve as the adjunction site of *again* to yield the restitutive reading. Two possible structures for the example are given in (15). They give rise to the repetitive and the restitutive readings, respectively. In (16) and (17) we provide the truth conditions resulting from compositional interpretation of these two structures. Note that the structure that is the input to semantic interpretation corresponds to the underlying structure.

(15) a.

```
                VP
               /  \
             VP    again
            /  \
          NP    V'
          |    /  \
        Sally V    SC
              |   /  \
              Ø  Adj   NP
                 |    /\
               open  the door
```

b.

```
                VP
               /  \
             NP     V'
             |     /  \
           Sally  V    SC
                  |   /  \
                  Ø  SC    again
                    /  \
                  Adj   NP
                  |    /\
                open  the door
```

(16) a. $\lambda e''.again_{e''}\lambda e.\exists P[P_e(S) \ \& \ \exists e'[BECOME_{e'} \ (\lambda e^*.open_{e^*}(t\_d)) \ \& \ CAUSE(e')(e)]])$

b. Once more, there was an action of Sally's that caused the door to become open.

(17) a. $\lambda e.\exists P[P_e(S) \ \& \ \exists e' \ [BECOME_{e'} \ (\lambda e''.again_{e''} \ (\lambda e^*.open_{e^*} \ (t\_d))) \ \& \ CAUSE(e')(e)])]$

b. There was an action of Sally's that caused the door to become once more open.

Informal renderings of the contributions of CAUSE and BECOME according to the standard Dowty (1979) and Lewis (1973) semantics are given below.

(18) [[BECOME]] (P)(e) = 1 iff   e is the smallest event such that P is not true of the prestate of e but P is true of the result state of e

(19) [[CAUSE]] (e')(e) = 1 iff   e' occurred, e occurred, and if e hadn't occurred then e' wouldn't have occurred

In (17′) we give a description of the restitutive reading in (17) that is parallel to (8) (the repetitive reading) above. On both readings, the sentence is only usable in contexts that furnish an earlier event. What that earlier event has to be differs between the repetitive and the restitutive readings. The repetitive reading requires an earlier event of the kind described in the sentence; the restitutive reading requires an earlier eventuality of the result state holding. In actual uses of *again*, the earlier event required by presuppositional *again* has to be salient in the context of use for the presupposition to be justified (see, e.g., Kamp & Rossdeutscher 1994 and Beck 2007 for discussion).

(17′) 'Sally opened the door again'
      is true of an event if that event is an opening of the door by Sally, and there was an earlier eventuality that was a state of the door being open;
      is false of an event if that event is not an opening of the door by Sally, and there was an earlier eventuality that was a state of the door being open;
      undefined otherwise.

This theory of restitutive *again* analyzes the ambiguity of example (2) as a structural ambiguity. The adverb always expresses repetition. What changes between the two readings is simply what is repeated: the entire action described by the sentence, or just its result state. This theory makes it necessary to decompose the lexical verb into a result state and another meaning component that includes BECOME. It applies to accomplishment and achievement verbs in the Vendler/Dowty classification. A syntactic constituent has to be identified that expresses the result state. On the restitutive reading, *again* is adjoined to that constituent.

2.2 Complex Predicates

There are accomplishment predicates that give rise to the same repetitive/ restitutive ambiguity when combined with *again*, where the structural analysis introduced above seems much more obvious. Those are complex predicate constructions like resultatives (we use the term *complex predicate construction* in the sense of Snyder 1995, 2001; see below). An example is given in (20).

(20) Sally hammered the metal flat again.

(21) a. Sally hammered the metal flat, and that had happened
        before.   (repetitive)
    b. Sally hammered the metal flat, and the metal had
        been flat before.   (restitutive)

Resultatives raise the question of how the verb is combined semantically with the small clause constituent that follows it. We follow once more von Stechow

(1995). An informal sketch of his analysis is given in (22) and (23). The suggestion is that the small clause expressing the result state is combined with the verb via a special interpretive principle that is responsible for the causative meaning of the construction.

(22) a. [Sally hammered [$_{SC}$ the metal flat]]
     b. Sally's hammering caused the metal to come to be flat.

(23) Principle (R) (informal version)
    A structure [NP V SC] is interpreted as "NP's Ving causes SC to come to be".

This informal suggestion is worked out properly by von Stechow as follows. In (24) we state the interpretation principle; (25) is a more detailed structure for the example that serves as the input to compositional interpretation; and (26)–(28) illustrate the steps of interpretation and its outcome.

(24) Principle (R) (formal version; von Stechow 1995)
    If $\alpha = [_V\gamma \ _{SC}\beta]$ and β' is of type $<i,t>$ and γ' is of type $<e,...<e,<i,t>>>$ (an n-place predicate), then
    $\alpha' = \lambda x1...\lambda xn.\lambda e.\gamma'_e$
    $(x1)...(xn)$ & $\exists e'$ [BECOME$_{e'}$ (β') & CAUSE$(e')(e)$]

(25) a. Sally hammered the metal flat.
     b. [[the metal] [1[$_{VP}$ Sally [$_{V'}$ $t1$ [$_{V'}$ hammered [$_{SC}$ PRO1 flat]]]]]]

(26) [$_{V'}$ hammered [$_{SC}$ PRO1 flat]] $\rightarrow$
    $\lambda x.\lambda y.\lambda e.$hammer$_e(x)(y)$ & $\exists e'$ [BECOME$_{e'}$ $(\lambda e''.$flat$_{e''}(x1))$ & CAUSE$(e')(e)$]

(27) [[the metal] [1[$_{VP}$ Sally [$_{V'}$ $t1$ [$_{V'}$ hammered [$_{SC}$ PRO1 flat]]]]]] $\rightarrow$
    $\lambda e.$hammer$_e$(the_m)(S) & $\exists e'$ [BECOME$_{e'}$ $(\lambda e''.$flat$_{e''}$ (the_m)) & CAUSE$(e')(e)$]

(28) Sally's hammering the metal caused it to become flat.

We said before that resultatives provide a more obvious application of the structural theory of *again*. This is because in contrast to lexical accomplishment and achievement predicates, resultatives come with an overt expression of the result state—the small clause. The analysis of *again* given earlier makes it easy to capture the repetitive/restitutive ambiguity as an example of structural ambiguity. We provide the relevant structures and their interpretations here.

(29) a. [$_{VP}$ [the metal] [1[$_{VP}$ [$_{VP}$ Sally [$_{V'}$ t1 [$_{V'}$ hammered
  [$_{SC}$ PRO1 flat]]] again]]]
 b. [$_{VP}$ [the metal] [1[$_{VP}$ Sally [$_{V'}$ t1 [$_{V'}$ hammered
  [$_{SC}$ [$_{SC}$ PRO1 flat] again]]]]]

(30) $\lambda e''.\text{again}_{e''} (\lambda e.\text{hammer}_e(t\_m)(S) \ \& \ \exists e' [\text{BECOME}_{e'} (\lambda e*.\text{flat}_{e*}(t\_m))$
  $\& \ \text{CAUSE}(e')(e)])$

(31) Once more, Sally's hammering the metal caused it to become flat.

(32) $\lambda e.\text{hammer}_e(t\_m)(S) \ \& \ \exists e' [\text{BECOME}_{e'} (\lambda e''.\text{again}_{e''} (\lambda e*.\text{flat}_{e*}(t\_m))$
  $\& \ \text{CAUSE}(e')(e)])$

(33) Sally's hammering the metal caused it to become once more flat.

Resultatives are just one kind of construction termed complex predicates by
Snyder (1995, 2001). Others are given in (34). Snyder groups these
constructions together on the basis of combined crosslinguistic and acquisi-
tional evidence.

(34) a. Joe wiped the table clean.   resultative
 b. Joe picked up the book.   verb-particle
 c. Joe put the book on the shelf.   *put*-locatives
 d. Joe gave Bill the book.   double object
 e. Joe swam to the island.   goal PP

Beck and Snyder (2001), Beck (2005), and Beck and Johnson (2004) suggest
that in all complex predicate constructions, there is a constituent expressing
the result state that is combined with the predicate via Principle (R). The result
state is indicated by the underlined material in (34).
　Regarding the different types of predicates that participate in the repetitive/
restitutive ambiguity, the following picture emerges: In lexical accomplish-
ments (as in achievements), semantic complexity is mapped into syntax via
decomposition. In complex predicate constructions, an overt result state is
combined with a verb via Principle (R). The resulting meaning is an
accomplishment interpretation both times. However, as we will see in the next
subsection, the difference in how this is achieved does matter for the purposes
of adverbs like *again*.

2.3 The Visibility Parameter (Rapp & von Stechow 1999, Beck 2005)

Adverbs like *again* that seem to be able to see into the internal composition of
an accomplishment predicate are called decomposition adverbs. Most adverbs
are not able to do so, as we illustrate here for *repeatedly* and *never*.

(35) a.   Sally repeatedly/never opened the door.
          #Sally brought it about that the door was repeatedly/never open.
     b.   Sally wiped the table clean repeatedly.
          #Sally's wiping caused the table to become repeatedly clean.

In the discussion of English decomposition adverbs (e.g., Dowty 1979), one finds besides *again* the adverb *almost*. Like *again*, *almost* in combination with predicates like *open* is said to have a result state modifying reading:

(36) a.   Sally almost opened the door.
     b.   Sally did something that caused the door to become almost open.

Interestingly, Rapp and von Stechow (1999) observe that the same is not true for the German equivalent of *almost*, the adverb *fast*:

(36′) a.   …weil   Sally   die   Tür   fast   öffnete.
            since   Sally   the   door   almost   opened
            'since Sally almost opened the door.'
      b.   #Sally did something that caused the door to become almost open.

Quite generally, Rapp and von Stechow observe that the possibility of a result state modifying reading depends on the particular word chosen. The German adverb *erneut* 'anew' seems synonymous with German *wieder* 'again', but it cannot have a restitutive reading.

(37)   Maria hat die Tür wieder geöffnet.   (repetitive/restitutive)
       Maria hat die Tür erneut geöffnet.   (repetitive/*restitutive)
       Maria has the door again   opened
       'Maria opened the door again.'

Rapp and von Stechow capture this difference between the individual adverbs by a lexical parameter (i.e., a parameter set in the lexicon for the particular adverb) that they call the Visibility Parameter.

(38)   The Visibility Parameter for decomposition adverbs
                                          (Rapp & von Stechow 1999)
       A D-adverb can/cannot attach to a phrase with a phonetically empty head.

Here is how this parameter would apply to one of our 'open the door' examples. On the surface, lexical decomposition for 'open' yields a structure in which the head of the VP is overtly filled, while the head of the small clause, previously occupied by the adjective 'open', is not (cf. (37′)). Any adverb ought to be able to modify the VP, but only a select few can modify the small clause, namely the ones that can attach to a phrase with a phonetically empty

head—in other words, the genuine decomposition adverbs, of which in English we have *almost* and (according to the data examined so far, but see the next section) *again*, and in German just *wieder*.

(37′)   [Maria [$_{VP}$ [∅ + open$_{Adj}$]$_V$ [$_{SC}$ *t* [the door]]]]

An interesting confirmation of this structural analysis of the facts comes from the minimal pair in (39) (from Rapp & von Stechow). The decomposition of *abkühlen* 'cool off' into 'BECOME + cool' is synonymous to 'become cool'. Yet a result state modifying reading is possible only with 'become cool'. This shows that we need to distinguish decomposition structures from phrases built in the syntax component proper. The adverb *fast* does not treat a decomposition structure as a regular syntactic projection and cannot attach to it.

(39)   a.   ...weil   die Milch fast   kühl wurde.   (result state mod. ok)
                 because   the milk   almost cool became
         b.   ...weil   die Milch   fast   abkühlte.   (result state mod. *)
                 because   the   milk   almost cooled
                 'because the milk almost cooled'

Rapp and von Stechow are not concerned with complex predicates and do not distinguish the result state of a complex predicate from the result state of a decomposition structure. There is reason to believe that complex predicates occupy an in-between status for the purpose of modifiability. Example (40) shows that German *fast* has access to the result state in complex predicates, whereas (41) shows that *erneut* does not.

(40)   a.   ...weil   Sally   den   Tisch   fast   sauber   gewischt   hat.
                 since   Sally   the   table   almost   clean   wiped   has
                 'since Sally wiped the table almost clean'
         b.   Sally's wiping the table caused the table to become almost clean.

(41)   a.   ...weil   Sally   den   Tisch   erneut   sauber   gewischt   hat.
                 since   Sally   the   table   again   clean   wiped   has
                 'since Sally wiped the table clean again'
         b.   #Sally's wiping the table caused the table to become once more
                 clean.

This is in line with Snyder's (1995, 2001) view on complex predicate constructions. He proposes that the mode of combination that results in a complex predicate is not a standard syntactic mechanism, but rather a bit of morphology occuring in the syntax. Not all languages allow this. A prerequisite is the availability of productive root compounding. The data in (40) and (41) suggest that some, but not all, adverbs have access to categories that are part of a complex predicate.

Beck (2005) thus proposes a revised version of the Visibility Parameter for adverbs that makes use of three settings. The idea is that any adverb can modify an independent syntactic phrase (i.e., a phrase introduced into a phrase structure tree by standard syntactic mechanisms like, e.g., the AP in (39a)), hence setting (i) in (42) is the default. Some adverbs, like German *fast*, can look inside the internal structure of a complex predicate. Other adverbs can even look inside a lexical decomposition structure; for instance, German *wieder*.

(42)   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).

The parameter concerns the interface between the lexicon/morphology and the syntax. It ranks projections in the syntactic structure according to their accessibility for further structure building—here, modification by adverbs. Complex predicates are more accessible than decomposition structures, but less accessible than regular phrases.

Beck (2005) uses (42) to describe in particular the behavior of Mandarin Chinese *you* 'again', which can have a restitutive reading with complex predicates but not with decomposition structures. The different possible settings of the Visibility Parameter will also allow us to describe the change in the behavior of English *again* that the next section will reveal.

3. The Data

To understand better the possibilities for appropriate use of *again* in the 19th century which our examples (3) and (4) attest, we have assembled a corpus of letters written in the 19th century. We chose to use letters because we wanted to get as close as possible to normal everyday language use, and letters seemed an appropriate text type for this purpose. Our texts come from the Gutenberg Archive and the corpus of Late Modern English Prose. The 19th-century corpus has 1,532,089 words. Subsection 3.1 gives an overview of our results regarding uses of *again* in the historical corpus. We need to contrast the 19th-century uses of *again* with uses of *again* in present-day English. To this effect, we collected letters, emails, blog contributions, and written interviews from no earlier than 1990. We have been unable to obtain such a recent electronic letter corpus, but we have chosen text types comparable to personal letters for our modern corpus. The modern corpus has 513,577 words. The two corpora are balanced with respect to the number of speakers and the number of *again*s that occur. Subsection 3.2 provides a survey of our results for the modern corpus, and subsection 3.3 compares our findings for the historical versus the modern speakers.

3.1 Historical Data

We have analyzed the instances of *again* from 15 historical speakers. Table 1 shows the numbers collected. Speakers are listed in alphabetical order (the texts from all speakers except for Green, who is from the corpus of Late Modern English Prose, are from the Gutenberg Archive). The second column of Table 1 provides the total number of instances of *again* for that speaker, the third column the number of plausibly restitutive uses of *again*, and the final column the percentage of restitutive *again*s among the instances of *again* used by that speaker. We classified a particular use of *again* as "plausibly restitutive" if the discourse context for this *again* supports the restitutive presupposition but not the repetitive one. Two kinds of circumstances are typical for this decision to be made: (i) the restitutive presupposition is maximally salient, or (ii) the repetitive presupposition is not met, but the restitutive presupposition is. In (43a) we give an example of the first kind and in (43b) one for the second. In (43a) the counterdirectional predicates 'light up' and 'sink' 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. In (43b) the use of 'the first time' makes it clear that the author cannot have returned to the relevant passages before. What is repeated can only be looking at those passages, so 'return again' must be restitutive.

(43) a. …a gleam of affectionate pleasure lighted it up for an instant, and straight it it sunk again. (Edgeworth)
      b. The first time of going over I shall mark the passages which puzzle me, and then return to them again. (Macaulay)

Table 1. Historical *again*s

Speaker	# of *again*s	# of rest. *again*s	% of rest. *again*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	25	28.4
Scott	41	16	39.0
Twain	174	42	24.1
Total	1015 (avg. 67.7)	214 (avg. 14.3)	21.1 (avg.)

We counted separately the instances of restitutive *again* with lexical accomplishment/achievement predicates (i.e., LA predicates), which require setting (iii) of the Visibility Parameter. Those are shown in Table 2, which specifies the number of uses of restitutive *again* with LA predicates, as well as the particular predicates that a speaker used with restitutive *again*. In (44) we list all lexical accomplishments and achievements that occur in the historical corpus with restitutive *again*. Note that there is quite a variety of different predicates.

(44)   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

Table 2. LA predicate + restitutive *again*s

Speaker	# of LArest	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 rest. *again*s)	total #: 37

3.2   Modern Data

We contrast the historical data with data collected from late 20th- and early 21st-century English letters, emails, blogs, and written interviews; we analyzed 15 native speakers' *again*s. The speakers are listed once more in alphabetical order in Table 3. As before, we provide for each speaker the total number of *again*s, the number of restitutive *again*s, and the percentage of restitutive *again*s. Note that we chose our corpora in such a way that the overall number of occurrences of *again* was about the same in the historical and the modern corpus, and that the speakers were similarly balanced according to number of *again*s they used.

Table 3. Modern *again*s

Speaker	# of *again*s	# of rest. *again*s	% of rest. *again*s
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)

As before, restitutive *again* with LA predicates was counted separately; see Table 4.

In (45) we provide a list of all LA predicates that occur in the modern corpus with restitutive *again*. Observe that there are only 12 predicates in all. It is interesting that the same predicates tend to recur, as opposed to the large variety we saw in (44): *start* alone accounts for 13 occurrences, *come* for 6, and *grow* for 5.

(45) LA predicates used with restitutive *again*
      begin, come, cover, fill, find, grow, open, plant, release, rise, start, wet

3.3. Evaluation

Restitutive *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, $p < .01$. We conclude that, generally speaking, restitutive *again* is declining.

Moreover, there are distinctions between PDE and 19th-century English in the availability of restitutive *again* with different kinds of predicates.[1] Restitutive *again* with LA predicates is more restricted in the modern corpus. There is a relatively small difference in overall numbers: today, 25.6% of the restitutive *again*s are with LA predicates, whereas it is 28.5% in our historical corpus; that is, LA restitutive *again* went down more (by 45%) than restitutive *again* did overall (by 38%). More revealing is a look at the individual

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[1] Unfortunately, here the numbers concerning occurrences of *again* become too small for statistical analysis. We limit ourselves to a qualitative analysis.

Table 4. LA predicate + restitutive *again*

Speaker	# of LArest	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 rest. *again*s)	total #: 12

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 at all. It is also revealing to consider the predicates that show up with LA resitutive *again*. We find 37 different predicates in the historical corpus and only 12 now; three predicates (*start, grow, come*) account for 24 out of 34 modern LA restitutive *again*s.

The role of the predicate should be considered carefully. One might worry that particular combinations of verb plus *again* could become idiomatic and no longer indicative of a systematic semantic combination of that verb and *again*. This phenomenon exists; in (46a) we give a German example with a clearly noncompositional use of a combination of a verb with *wieder* 'again' and in (46b) an English example (which occurs in the modern corpus) of a combination with *again* that could well be on its way to becoming noncompositional.

(46) a. wiedergeben: (i) give back
                      (ii) render
     b. salads of the 'cut-and-come-again' variety

It is possible that a speaker acquires the term 'cut-and-come-again salad' as the name for a certain kind of salad, without analyzing it as a restitutive use of the adverb *again*. Use of this term is thus not a reliable indication that the speaker is able to use restitutive *again* with LA predicates (i.e., has acquired setting (iii) of the Visibility Parameter). Given this, the limited number of predicates in the modern corpus is potentially very significant. Having just one verb occuring with restitutive *again* may not be a sufficient indication of setting

(iii); for example, a speaker might interpret 'come again' as a chunk to mean 'come back' without compositional analysis. A reasonable criterion for taking a speaker to have setting (iii) of the Visibility Parameter would be that the speaker use restitutive *again* with at least two different LA predicates. Only 4 modern speakers meet this criterion, whereas 14 out of 15 historical speakers do.[2] We take our results to mean that setting (iii) of the Visibility Parameter is available only to a subgroup of the modern speakers.

This interpretation of the data agrees with the results of our small study with four PDE speakers that showed varying judgments on restitutive *again* with decomposition structures, but not with predicates that mark the result state. The study showed the following results:

(47) a. %return again   (restitutive)
      b. come back again   (restitutive)

(48) a. %connect the parts again   (restitutive)
      b. put the parts together again   (restitutive)

The judgments were elicited by presenting the target sentence in a context that only supports the restitutive reading and asking for an acceptability rating. The participants in the study were native speakers of English with some background in linguistics and an understanding of the task of providing an acceptability judgment, but naive as to the goals of the study. For (47), for instance, the participants received the context and test items in (49).

(49) Sally started a job at the University of Potsdam last week. She was told to go to the payroll office first. But there they told her that she needed a bank account before they could process her contract. So Sally went into town and opened a checking account with Deutsche Bank. With her account information,
      (a) she went back to payroll again
      (b) she returned to payroll again
      where they told her that now they needed her town registration.

Half of the participants accepted the examples with the LA predicate and half did not. The complex predicates were unanimously accepted.

We propose that PDE *again* is moving from setting (iii) of the Visibility Parameter to setting (ii). Our PDE speakers have restitutive *again*, but some of them only with visible result states (complex predicates and independent

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[2] The probability of 14 out of 15 historical versus 4 out of 15 modern speakers having restitutive *again* with lexical accomplishment predicates was calculated by a χ^2-test and turned out to be significant, $p < .05$. However, the numbers involved here, too, 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.

phrases). Other speakers still seem to be able to use restitutive *again* with invisible result states, like the historical speakers.

(50)   The Visibility Parameter for adverbs (Beck 2005)
       An adverb can modify
       (i)   only independent syntactic phrases
       (ii)   any phrase with a phonetically overt head   ← % PD *again*
       (iii) any phrase   ← % PD *again*,
                                                              19th-cent. *again*

       The default setting is (i).

An anonymous reviewer suggests that there is another interpretation of the result that fewer combinations of LA predicates and restitutive *again* are possible in PDE. Instead of blaming *again* and providing an analysis in terms of Visibility, one could hypothesize that the predicate is to blame: perhaps there is a tendency for predicates to lose their ability to be analyzed into a decomposition structure and to be mapped into the syntax as such. This would also make restitutive *again* impossible with these predicates. We consider this hypothesis prima facie plausible (see also Beck 2005 for some comments on the relevance of the predicate for availability of restitutive *again*). However, remember that according to Rapp and von Stechow (1999), PDE *almost* in contrast to German *fast* has access to result states in decomposition structures. More generally, evidence for decomposition structures comes from availability of result state modifying readings with adverbs and adverbials other than *again*. Two relevant examples are given here.

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

The data are to our knowledge uncontroversial. But if *almost* and *for*-adverbials have access to the relevant decomposition structures, they must be available, and there is no explanation coming from the predicate as to why *again* is unable to see them. Thus we stick to our interpretation of the data in terms of Visibility: the answer is (42).

4. Conclusions and Consequences

Our corpus study has shown that restitutive *again* was more generally available in the 19th century than it is today. Its use is declining in particular with LA predicates. Our data are confirmation of Rapp and von Stechow's (1999) Visibility Parameter for adverbs. Without the parameter, the diachronic change occuring with English *again* and the difference between decomposition structures and complex predicates could not be described. The observed change supports specifically the more fine-grained version of the parameter

developed in Beck 2005, which distinguishes complex predicates from both independent syntactic phrases and decomposition structures: the more restrictive dialect of PDE requires setting (ii) of the Visibility parameter. So far, the intermediate setting (ii) was supported by the behaviour of German *fast* 'almost' on the one hand and in Beck's crosslinguistic study by (mainly) Mandarin Chinese *you* 'again' on the other. Although we are convinced of Rapp and von Stechow's analysis of *fast/almost* and the relevance of Visibility, it should be noted that it depends on the semantic analysis of the adverb. *Almost* is somewhat less well understood than *again*. Under the assumptions made by Penka (2007), for example, the syntactic position of *almost* should play less of a role in determining the interpretation that *almost* gives rise to, and the issue of Visibility would need to be reexamined. Thus we consider it important to have a second data point with the repetitive decomposition adverb that supports the Visibility Parameter and the relevance of setting (ii) besides Mandarin. Our data moreover document that Visibility plays a role in particular in the grammar of English. As discussed in Beck 2005, the relevance of Visibility in turn supports a structural ambiguity analysis of the repetitive/restitutive ambiguity over the competing analysis as lexical ambiguity (as defended in, e.g., Fabricius-Hansen 2001 and Jäger & Blutner 2000).

The Visibility Parameter itself is interesting due to its interface nature, tying together surface form and interpretational possibilities. Rapp and von Stechow essentially observe that phrases in a decomposition structure do not have the same status as phrases that enter into the phrase structure via regular syntactic modes of combination. Only a very restricted class of adverbs can treat these phrases as regular syntactic projections and choose them as adjunction sites (i.e., use them for further structure building). Snyder (1995, 2001) makes a similar observation about complex predicates. He reasons that complex predicates are derived by a mode of combination that we should see as morphological rather than syntactic (and, as we saw in section 2.2, they are interpreted by a special interpretive principle that is not systematically available as a mode of composition for regular syntactic structures). Result phrases inside a complex predicate thus also do not have the same status as regular syntactic phrases. The Visibility Parameter as proposed in Beck 2005 and argued for here ties together these two results. It also ranks decomposition structures and complex predicates in such a way that complex predicates are more transparent to regular syntactic processes than decomposition structures. Both count as "morphological" domains but differ in terms of whether phonological material is present—a difference that plays a role for syntax in other places (see, e.g., Svenonius 2005 for some general recent discussion and references). Decomposition adverbs are used as a probe into the lexicon/ morphology–syntax interface. Their interpretational possibilities reveal accessibility of structures to syntactic mechanisms—what we call here the Visibility of those structures. A project for future research is the question what other syntactic processes, besides modification by or adjunction of adverbs, can access result phrases in decomposition structures and complex predicates.

Furthermore, a novel result of the present study concerns the direction in which a change in the setting of the proposed lexical parameter can take place. We observe that it is possible for an adverb to move from setting (iii) to setting (ii)—that is, to become more restricted or, in effect, to lose interpretive possibilities. We discuss briefly how such a change might come about and what could trigger it.

Regarding the question of how the observed change could be effected, William Snyder (p.c.) observes that English learning children seem to acquire restitutive *again* first with complex predicates: All first clear uses of restitutive *again* in the CHILDES database involve complex predicate constructions (see Table 5). There is no such bias toward complex predicates with repetitive *again*. At the same time, the adult input has restitutive *again* largely with complex predicates.

We hypothesize that the setting of the Visibility Parameter in the time course of language acquisition moves from setting (i) to setting (ii) to setting (iii), provided that the child has positive evidence to effect the change in the setting. English-learning children today receive reliable input to arrive at setting (ii) for the adverb *again*. But some children may not receive enough input to acquire setting (iii) and restitutive *again* with lexical accomplishments any more.

This begs the question of what could bring about the change in the adult input that must obviously have occurred; that is, we are led to our second question from above of what triggered the observed diachronic development. Because the change corresponds to a loss of interpretive possibilities for the adverb *again*, one should look for other expressions that might have taken over the role of restitutive *again*. Two structural possibilities for the expression of restitutive readings come to mind: the lexical item *back* and the verbal prefix *re-*; both have been mentioned to us by anonymous reviewers in connection with possible triggers of the observed change. The semantic parallel to restitutive *again* is illustrated by the examples in (52)–(54). See, for example, Keyser and Roeper 1992, Lieber 2004, and Marantz 2007 on the prefix *re-*. Example (54c) is from Dowty 1979 and shows that the restitutive reading is clearly available. An added motivation for investigating *back* in this context is the observation that it frequently occurs doubled with *again* (e.g., in the forms in (55), where either *back* or *again* would be sufficient)—an interesting issue for semantic analysis.

(52) a. I put the parts together again.
      b. I put the parts back together.

(53) a. The splendor of the argument took Jill's breath away, and before she got it again, in came Frank and Ralph…

       (*Jack and Jill* by Louisa May Alcott)

      b. …and before she got it back,….

Table 5. First clear uses of restitutive *again* for 11 children from CHILDES (William Snyder, p.c.)

Child	Restitutive *again*	Age
Abe	I turn it on again. [of fan that he'd just turned off]	(2;06.16)
Adam	put together again. [asking Mother to repair toy dog]	(2;03.18)
Allison	I want put him together again Mommy. [of toy giraffe that she had just broken]	(2;04.00)
April	[No relevant uses]	(last transcript 2;11.00)
Eve	I can't push it together again. [of toy train tracks, after moving one section]	(2;01.00)
Naomi	I come back again. [will return after giving doll a popsicle]	(2;04.05)
Nath	wanna put da back on again. [of child toilet seat that Mother had just removed]	(2;06.25)
Nina	and you could put 'em on again when she's finished taking the nap. [of doll's shoes, to be removed for "nap"]	(2;10.21)
Peter	came out again. [putting together halves of toy barrels, but a mismatched pair failed to stay together]	(2;03.00)
Sarah	ge(t) TV in again? [of TV set sent out for repairs]	(3;03.20)
Shem	I take off the belt and put it on again. [of toy with buttons etc. to fasten and unfasten]	(2;04.04)

(54) a. I opened the door again.
     b. I reopened the door.
     c. The satellite reentered the earth's atmosphere at 3:47 P.M.

(55) a. put (something) back on again   (e.g., Nath in Table 5)
     b. come back again   (e.g., Naomi in Table 5)
     c. put (something) back together again
     d. get (something) back again

How could we investigate the plausibility of either strategy becoming available as a trigger of the decline of restitutive *again*? One would have to find out whether there is a connection between the rise of *re*-verbforms or adverbial *back* and the loss of restitutive *again*. If there was an increase in the use of *re*-verbforms like (54b) or predicates with *back* like (52b) and (53b) between our historical and our modern corpus (or similar such corpora) that could be seen as the mirror image of the decrease in uses of restitutive *again* we observed, this would make availability of those alternative structures a candidate for a trigger of the observed change. We are not aware of any such studies at present and must leave the question for future research.

We conclude that we have found evidence for a diachronic change in the possible uses of the decomposition adverb *again*. The source of the change is the setting of a lexical parameter for the adverb, which operates at the lexicon/morphology–syntax and determines possible restitutive uses. We have indicated how the time course of acquisition provides a locus for effecting the change in the observed direction, and we have speculated on possible triggers, raising questions for future investigation.

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Electronic Sources

The historical data can be identified and are freely accessible from:
Corpus of Late Modern English Prose: http://www.llc.manchester.ac.uk/
subjects/lel/staff/david-denison/lmode-prose/
Gutenberg archives: http://www.gutenberg.org

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