Pieces of the *be* Perfect in German and Older English

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1   Introduction

Older English had constructions with a past participle and an auxiliary verb which look at first very much like the periphrastic perfects of many modern European languages:[1]

(1) a. as   ha   þreo **weren** ifolen onslepe…
         when they three were   fallen asleep…
         'When the three of them had fallen asleep…' (CMANCRIW-2,II.272.440)
     b. …huanne hi **heþ** wel yuoȝte
         …when   he has wel fought
         '…when he has fought well' (CMAYENBI,252.2315)

Consider the similarities with the German perfect, exemplified in 2:

(2) a. Als   die drei eingeschlafen waren…
         when the three fallen-asleep   were
         'When the three of them had fallen asleep…'
     b. Wenn er gut   gekämpft hat
         when he well fought   has
         'When he has fought well'

In older English as in German, the constructions are used to refer to eventualities with some notion of pastness, and the auxiliary is usually *be* with verbs we would expect to be unaccusatives, while it is usually *have* with transitives and unergatives. Of course, there is an important point about the subsequent history of English in which it diverges from languages like German, Dutch and Italian. The Modern English perfect continues only the construction with auxiliary *have*, while the one with *be* disappeared by the end of the 19th century. We can expect this change to be relevant for our understanding of auxiliary selection cross-linguistically, as it should allow us to relate changes in the auxiliary system with other changes in the language.

In this talk we will attempt to do precisely this, but we will do so by questioning whether auxiliary selection is all that differentiates sentences like 1a from those like 1b. We will argue that older English did not have a single 'perfect' tense/aspect category with auxiliary alternation like we find in German, but rather two constructions with distinct temporal syntax and semantics. The one with *have* had a real specification for anteriority at the clausal level much like the Modern English perfect, while that with *be* was a resultative stative participle combined with a simple copula. Evidence for this will come primarily from restrictions on the appearance of the *be* construction which are more like what we find in German with its stative passive than with its *sein* perfect.

The guiding idea behind our analysis is that what has been called the 'perfect' across languages is not a monolithic category with consistent properties. Rather, what we find, both within and across languages, is a series of complex categories with more or less similar semantic and morpho-syntactic properties. The way to account for the patterns of similarity and difference that we find is by identifying the pieces that make up the various 'perfects', and determining which ones are present in a particular construction and which ones are not. This strategy will allow us both to account for the distribution of

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[1]Except where otherwise noted, the data for this paper come from the *Penn-Helsinki Parsed Corpus of Middle English*, 2nd edition (Kroch and Taylor 1999) and the *Penn-Helsinki Parsed Corpus of Early Modern English* (Kroch, Santorini and Delfs 2005). The final line of each example gives the sentence ID as it appears in the original corpus file. We use the term 'older English' to refer collectively to Old English (OE), Middle English (ME) and Early Modern English (EModE).

the *be* and *have* 'perfects' in older English, and to tie the change in their relative frequency to previously identified changes in the *have* perfect.

2   Making sense of the restrictions on *be*

The loss of perfect auxiliary *be* in English has received a great deal of attention in historically-oriented work, (see in particular Hoffmann 1934, Fridén 1948, Johannisson 1958, Mustanoja 1960, Traugott 1972, Zimmermann 1973, Kakietek 1976, Rydén and Brorström 1987, Kytö 1997), the relevant results of which can be very briefly summarized as follows. *have* first started showing up with verbs that used to exclusively take *be* during the ME period, around 1300, but didn't completely replace *be* until ca. 1900. During the intervening 6 centuries or so, *have* was favored especially in modal and irrealis contexts, past and infinitive perfects and iterative and durative contexts. What is needed is an account of why these factors were relevant, and why the change took so long to go to completion.

In previous work on the subject (McFadden and Alexiadou to appear), we have made some initial progress in this direction. We have determined that the modal/irrealis contexts that are relevant can be characterized specifically as past counterfactuals, as those in 3:

(3)   And if þow **hadest** come betyme, he hade yhade þe maistre
      and if you had   come timely   he had had   the master
      'And if you had come in time, he would have prevailed.'
      (CMBRUT3,227.4102)

Crucially, sentences like these don't just favor *have* over *be*, they essentially require it. Of the 910 intransitive pluperfects with counterfactual interpretations we have found in the ME and EModE corpora, 903 (99.2%) use *have*. Indeed, we will argue below that the other 7 aren't really past counterfactuals, thus this generalization is exceptionless. What is more, the *have*-favoring effects that have been reported for categories like the past perfect can be largely or completely chalked up to interference from the counterfactual effect. That is, past perfects occur with *have* on average more than present perfects do simply because a large number of past perfect forms are past counterfactuals.

The explanation we have proposed for this past counterfactual effect goes basically like this. Following Iatridou (2000), we assume that the counterfactual meaning is contributed by finite past tense morphology. To get a past counterfactual, you thus need something else which can contribute real anteriority. We then suggested that, in older English, the *have* perfect could contribute this anteriority, being a kind of relative past as it is in Modern English. The *be* 'perfect', on the other hand, was just a stative resultative, and thus could not yield a past counterfactual meaning. If such was needed, *have* would thus have to fill in, no matter what main verb was involved. What we would like to do in this paper is to expand and refine this analysis so that it will also cover the remaining factors which seem to favor *have*.

Iterativity and durativity in particular don't seem to have anything to do with counterfactuality. Yet they have been consistently reported by previous researchers to favor *have*. Kytö (1997), e.g., presents the following examples:

(4)   a. Syns the death of them it **hath** sumwhat decayed. (Durative)
          (Leland, *The Itinerary of John Lelan* I 143).
      b. how wel oftymes **hath** this fel theef goon rounde aboute this wal (Iterative)
          (Caxton, *History of Reynard the Fox* 11)

Drawing from a corpus covering late ME up to the present day, she reports that 73% of durative perfects like 4a have auxiliary *have*, compared to 54% among non-duratives. Similarly, 78% of iterative perfects like 4b have auxiliary *have*, again compared to 54% among non-iteratives.[2]

Kytö's numbers on general patterns can be supplemented with data we have found on contexts involving particular kinds of adverbial elements. E.g., among non-counterfactual perfects involving verbs which can potentially occur with *be*, we have found 16 examples containing a PP headed by *through* or *throughout* denoting a path of motion as in 5:

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[2]Her corpus contains enough examples for both of these differences to be highly statistically significant.

(5)   a.   they had gone thorow the Ile vnto Paphos
            (AUTHNEW-E2-P2,XIII,1A.784)
        b.   I had past through many Countryes
            (FOX-E3-P2,110.182)

Whereas goal PPs with *to* set up telic events with nice result states, these *through* PPs point to the duration of an activity. Indeed, all 16 such examples have auxiliary *have*. Another common formal indication of durativity comes from adverbs and adverbials NPs that explicitly measure the duration or extent of the eventuality, as in the examples in 6:

(6)   a.   he had gon **so longe** be londe & be see
            'He had gone so long by land and by sea...'
            (CMMANDEV,122.2971)
        b.   we had travell'd **One and twenty Miles**
            (FRYER-E3-P2,2,202.126)

We have found 53 such examples of non-counterfactual perfects containing a measure adverbial and a verb that can appear with *be*. 35 of them use auxiliary *have* (66.0%), whereas only 591 of 2130 total perfects with these verbs show *have* (27.7%).

     The question is how we can unify these contexts. What do they have in common that favors *have*? The (largely descriptive) previous literature offers some suggestive remarks about the distinction between state and action, for which Kytö (1997) can again serve as representative:

> "Over the centuries, the distinction between state/result (indicated by *be*) and action (indicated by *have*) seems to have been one of the main distributional factors influencing the choice of the auxiliary." (Kytö 1997, p. 31)

The generalization that we are going to propose is essentially a stronger and more precise version of this idea. Specifically, *be* appears only in examples that would be characterized as **perfects of result**, while *have* appears everywhere else, in particular with what would be characterized as **experiential perfects**.

     These two kinds of perfect can be distinguished as follows (see Iatridou, Anagnostopoulou and Pancheva 2003, and references cited there for more discussion). The perfect of result describes a state holding at the topic time, which is the result of the underlying eventuality.[3] E.g.:

(7)   I have lost my cellphone. Help me find it.

This can be interpreted as a perfect of result because the cellphone is still lost, as indicated by the second sentence. The experiential perfect, on the other hand, describes an eventuality that occurred previous to the topic time, often an experience that the subject has had. E.g.:

(8)   a.   I have lost my cellphone three times in the past year.
        b.   I have been sick before.

Example 8a cannot be a perfect of result, because the cellphone isn't still lost three times. Rather, we have a clear experiential perfect reading, such that the subject has had the experience of losing a cellphone three times. Example 8b also has a clear and unambiguous experiential perfect reading, but due to a different factor. Here a perfect of result interpretation is impossible because the underlying eventuality – 'be sick' – is atelic, in particular stative, and thus does not yield a result state at all under normal circumstances.

     The issue, then, is not iterativity or durativity per se, but whether a given context is compatible with a perfect of result interpretation. Duratives are typically atelic, or at least focus attention on the activity rather than its result. Iteratives, like example 4b, typically imply that the result state of each iteration no longer holds when the next iteration takes place. Neither kind of context yields a good result state, thus neither is conducive to a perfect of result, and so in both the *be* 'perfect' is rare.

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[3] Topic time is used here in the sense of Klein (1992), and corresponds essentially to the Reichenbachian reference time. It is the time about which an assertion is made by an utterance, and is related to the time of utterance by T.

Support for this generalization comes from the examples where *have* shows up with a verb that otherwise usually takes *be*, which don't fit into any of the categories discussed so far. E.g., several examples involve verbs of motion, where the motion is, however, clearly atelic:

(9) a. þei han gon all aboute the cytee
   they had gone all about the city
   'They had walked all around the city.' (CMMANDEV,117.2859)

   b. ʒe haue in his lande riden wiþ baner displaiede...
   you have in his land ridden with banner displayed
   'You have ridden in his land with banner displayed...'
   (CMBRUT3,222.3998)

Again, an atelic eventuality does not yield a good result state, so the fact that we get *have* in such examples can be assimilated to our generalization. Another class of examples describe a past eventuality which was telic, but whose result state no longer holds at the topic time:

(10) a. For ye han entred into myn hous by violence
   'For you have entered into my house by force' (CMCTMELI,328.C1.814)

   b. but he was +git in that place, where Martha hadde comun a+gens hym.
   'But he was still in the place where Martha had come and met him.'
   (ID CMNTEST,XI,20.1102)

Sentence 10a is uttered by a man accusing thieves after the fact, when they are no longer in his house. Sentence 10b comes at a point when Martha has already left, and sent her sister Mary back to meet him (Jesus). Since the result state no longer holds, these must be experiential perfects. Finally, there are a number of examples which describe an eventuality which happened once for each individual denoted by the plural subject:

(11) a. many a grete hurte hath byfallen
   'Many great injuries have occurred' (CMREYNAR,53.369)

   b. for many fayre knyghtes have assayed, and here have ended.
   'For many fair knights have tried, and have ended here.'
   (ID CMMALORY,196.2982-3)

These are not strictly speaking iteratives, but like iteratives involve a series of independent eventualities which don't yield a nice unified result state. Rather, they yield quite clear experiential perfects.

What we need now is an explanation for why *be* could show up in perfects of result in older English, but not in experiential perfects. A comparison with German will suggest an approach.

3 A German Comparison

Alongside its *haben* 'have' and *sein* 'be' perfects (12a and 12b), German has a construction called the stative passive (12c), which is formally identical to the latter, but has very different semantic properties:

(12) a. Er hat gearbeitet.
   he has worked
   'He has worked.'

   b. Er ist angekommen.
   he is arrived
   'He has arrived.'

   c. Er ist besiegt.
   er is defeated
   'He is defeated.'

The difference in the temporal/aspectual semantics is suggested by the English translations – perfects for 12a and 12b versus a present for the stative passive 12c. What is interesting is that, in a number of relevant contexts, both kinds of German perfect behave like the older English *have* perfect, while the stative passive is parallel to the older English *be* 'perfect'.

Consider first what happens in durative (13) and iterative (14) contexts. The contrast we find is not between constructions with *haben* and those with *sein*, but between both perfects and the stative passive:

(13)   a.   Seit deren Tod, hat Erosion die Festung immer weiter zerstört.
          since their death has erosion the fort   always further destroyed
          'Since their death, erosion has destroyed the fort more and more.'
     b.   Seit deren Tod, ist die Festung immer weiter verfallen.
          since their death is the fort   always further decayed
          'Since their death, the fort has decayed more and more.'
     c.   * Seit deren Tod, ist die Festung immer weiter zerstört.
          since their death is the fort   always further destroyed
          intended: 'Since their death, the fort has been destroyed more and more.'

(14)   a.   Wir haben ihn in den letzten zehn Jahren immer wieder eingesperrt.
          we have him in the last   ten years always again locked-up
          'In the last ten years we have locked him up again and again.'
     b.   Er ist in den letzten zehn Jahren immer wieder entkommen.
          he is in the last   ten years always again escaped
          'In the last ten years he has escaped again and again.'
     c.   * Er ist in den letzten zehn Jahren immer wieder eingesperrt.
          He is in the last   ten years always again locked-up
          intended: 'In the last ten years he has been locked up again and again.'

The *sein* perfect like the *haben* perfect has no trouble appearing in these contexts. The stative passive, on the other hand, doesn't work so well – just like the older English *be* perfect.

A further interesting parallel comes from the interpretation of counterfactuals. In German as in English, counterfactuality is encoded with the past subjunctive.[4] As we might expect, if we take a perfect, either with *haben* or *sein*, and put its auxiliary in the past subjunctive, we get a past counterfactual. Both 15a and 15b are past counterfactuals, about unrealized past eventualities:

(15)   a. Wenn er gearbeitet hätte...
         if   he worked   had:SBJ
         'If he had worked...'
     b. Wenn er angekommen wäre...
         if   he arrived   were:SBJ
         'If he had arrived...'
     c. Wenn er besiegt wäre...
         if   he defeated were:SBJ...
         'If he were (in the state of having been) defeated.'

On the other hand, when we take a stative passive and put its auxiliary in the past subjunctive, as in 15c, we get something that is about an unrealized **present** eventuality – a present state which happens to be the result of a past event. In other words, we have a present counterfactual. Recall then we found 7 apparent counterexamples to the generalization that past counterfactuals in older English required auxiliary *have*, i.e. 7 counterfactuals with a past form of *be*. In fact, there is reason to believe that these are **present** counterfactuals of resultative states, parallel to 15c. Consider the examples in 16:

(16)   a.   and this is to singnefie the certeynte of profecie, whos bifalling of tyme to comynge is so certeyn, as if it **were passid** now
          'and this is to signify the certainty of prophecy, whose happening in time to come is as certain as if it had already happened now.' (CMPURVEY,I,55.2214)

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[4]Of course, in English subjunctive forms are frequently non-distinct from indicative ones.

b. The Fellow looks as if he were broke out of Bedlam.
    'The fellow looks as though he had broken out of Bedlam[5]'
    (FARQUHAR-E3-H,60.477)
c. yf he had your sowle I wene he shold be gone.
    'If he had your soul, I think he would be gone.' (MERRYTAL-E1-P1,10.128)

The correct interpretation of such examples is by no means certain, especially since a present resultative state does after all imply a past event. Nonetheless, in 16a, the adverb *now* suggests a present state rather than a past eventuality, and in 16b, the present tense in the main clause supports a present counterfactual interpretation of the embedded clause. In 16c, the antecedent clause *yf he had your sowle* looks like a present counterfactual, since it is formally a simple past rather than a pluperfect, thus we expect the consequent clause to be a present counterfactual as well.

Finally, and perhaps not surprisingly, the German stative passive is infelicitous in contexts where the result state no longer holds, as in 17c. This contrasts directly with both the *haben* and *sein* perfects in 17a and 17b:

(17) a. Ich habe mein Handy   verloren und dann gleich   wieder gefunden.
          I   have my   cellphone lost,   and then immediately again   found
          'I have lost my cellphone and then found it again right away.'
      b. Mein Handy   ist verschwunden und dann gleich   wieder aufgetaucht.
          my   cellphone is disappeared,   and then immediately again   turned-up
          'My cellphone has disappeared and then shown up again right away.'
      c. * Mein Handy   ist verloren, und ich habe es dann gleich   wieder gefunden.
          my   cellphone is lost   and I   have it then immed. again   found
          intended: 'My cellphone has been lost, and then I've found it again right away.'

This is precisely parallel to the older English pattern exemplified in 10.

It would seem, then, that the older English *be* 'perfect' is more like the German stative passive than it is like the *sein* perfect. Furthermore, in all of these respects it is distinctly **unlike** the older English *have* perfect. We will thus take the German stative passive as a model for our formal analysis of the older English *be* perfect.
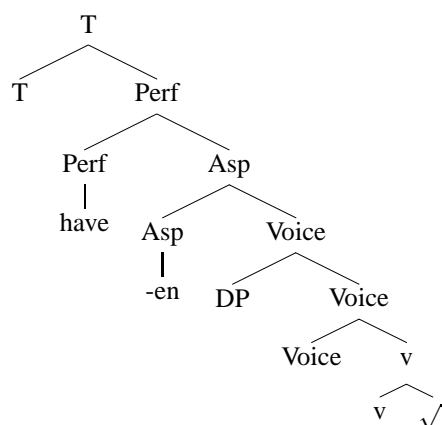
4   A formal analysis

The central point of our analysis is the distinction between the older English *have* and *be* 'perfects', in particular that they were **not** just a single temporal/aspectual category modulo auxiliary selection. Rather, the construction with *have* was like the Modern English and German perfects in that it contained material at the clausal level denoting anteriority, while the construction with *be* lacked this material. It was instead a copular construction built around a stative resultative participle.

In structural terms, we propose that the anteriority relation was contributed by a functional head below T which was spelled out as *have* (see Iatridou et al. 2003, von Stechow 1998). For an unergative *have* perfect we can thus propose a structure like 18:[6]

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[5]Bedlam was the name of an infamous psychiatric hospital in London.

[6]We follow Embick (2004) in assuming that the past participial morphology spells out (various varieties of) an Asp(ect) head. For the assumption of category-neutral roots see e.g. Marantz (1997).
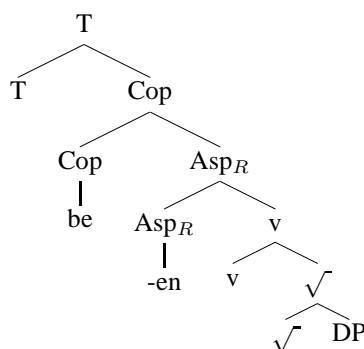
(18)

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                              T
                         ╱        ╲
                        T          Perf
                              ╱          ╲
                            Perf          Asp
                             │        ╱         ╲
                            have    Asp          Voice
                                     │        ╱        ╲
                                    -en      DP         Voice
                                                     ╱       ╲
                                                   Voice       v
                                                            ╱    ╲
                                                           v      √
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This structure is compatible with a number of recent theories on the precise semantics of the perfect, but for concreteness, we can consider it in the terms of Klein (1992). T establishes a relationship between the Time of Utterance (TU) and the Topic Time (TT), i.e. the time about which an assertion is being made. The Perf head relates this Topic Time to the Time of the Situation (TSit), i.e. the time at which the eventuality described in the VP (or vP) takes place. Specifically, it says that TSit is before TT, i.e. at TT, the eventuality has already happened.

Crucially, the older English *be* perfect lacked this Perf head. Following our discussion above, we can adopt a structure similar to what has been proposed in the literature for resultative stative passives (see e.g. von Stechow 1998, Kratzer 2000, Anagnostopoulou 2003, Embick 2004):

(19)

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                              T
                         ╱        ╲
                        T          Cop
                              ╱          ╲
                            Cop          Asp_R
                             │        ╱         ╲
                            be      Asp_R          v
                                     │        ╱        ╲
                                    -en       v          √
                                                      ╱     ╲
                                                     √        DP
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The most important element here is the Asp_R head. It produces a state which is the result of a prior event, and thus requires as its complement an eventuality which can reasonably produce a result state. This explains why iteratives, duratives and atelic predicates in general don't like to show up in the *be* perfect. Furthermore, the lack of an overt source for anteriority explains why this structure can't yield past counterfactuals – only counterfactuals of result states. Note then that our analysis gives direct expression to the connection between the auxiliaries themselves and the character of the constructions. Auxiliary *have* is in fact the spell out of the Perf head which gives that construction its characteristic temporal-aspectual interpretation. Auxiliary *be*, on the other hand, is simply the copula that shows up to introduce non-verbal predicates.[7]

Now, our analysis also makes a straightforward prediction. If the *be* construction lacks the Perf head which characterizes the *have* construction, it should be possible to make a perfect out of it by adding *have* on top. Indeed, we have found 8 examples of just this type, like those in 20:[8]

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[7]We do not wish to make any strong claims about where this *be* is introduced. Our choice of the label Cop for the head is simply meant to show that it should be introduced wherever the copula is introduced in other sentence types. Note, however, that it is probably somewhere below T, since the copula shows up below modal and aspectual auxiliaries bearing finite (Tense) inflection.

[8]This is a fairly small number of examples given the size of our corpora. However, the construction itself is quite complicated, so it's not terribly surprising that it there would only rarely be reason to use it.

(20) a. . . . supposing that the prisoners had beene fled
         (AUTHNEW-E2-P2,XVI,20A.1123)
      b. At which time we thought our Enemies had been come to beset the House
         (ESSEXSTATE-E2-P1,200.122)

5   The historical developments

Some final support for our analysis comes from data on the changes in the frequency of the two auxiliaries. It is generally agreed that both periphrastic constructions started out sometime in the pre-history of OE as resultatives. The additional functions like the experiential perfect are all innovations which only came in much later, during the historical period (see e.g. Elsness 1997). Our analysis thus amounts to saying that these innovations were restricted to the *have* perfect, while the *be* perfect stayed put in its role as the resultative with certain kinds of predicates. Note that this is in clear distinction to languages like German, where the constructions with 'have' and 'be' have developed in parallel. Now, if this is correct, it actually provides us with an explanation for why *have* first started showing up with verbs like *come* which previously only took *be*. Specifically, the new experiential perfect was essentially unrelated to and not really in competition with the *be* resultative, because it was showing up in territory that was new for periphrastic forms of any kind. In these contexts the construction with *have* was not replacing *be* 'perfects', but preterit constructions, and thus it is unremarkable that it appeared with all verbs, including ones which had always built their resultative with *be*.

Evidence that this is actually what was happening during ME and EModE can be found if, instead of measuring the relative frequency of *have* and *be* among 'perfects', we measure the frequency of each kind of perfect individually, against the total number of clauses. What we find is precisely what our account predicts, as shown in Table 1.[9] While the frequency of *have* perfects rises more or less steadily from

Period	IPs	*be* prf	%	*have* prf	%
M1	44,050	152	.35	146	.33
M2	22,958	29	.13	116	.51
M3	74,294	223	.30	573	.77
M4	39,737	145	.36	420	1.06
E1	79,756	295	.37	777	.97
E2	94,378	421	.45	1,235	1.31
E3	79,928	276	.35	940	1.18

Table 1: *be* and *have* 'perfects' as compared to total clauses

early ME through EModE, the frequency of *be* 'perfects' does not go down, but stays rather stable.[10]

We can also follow these developments in the history of past counterfactuals. In OE and early ME, past counterfactuals were expressed with simple past subjunctives, i.e. without any kind of periphrasis, as in the following example from Molencki (2000):

(21) ac hit wære   to hrædlic gif he þa   on cildcradole acweald wurde
      but it were-SBJ too quick   if he then on child-cradle killed   became-SBJ
      'but it would have been too early if he had been killed in his cradle then' (ÆCHom i.82.28)

The finite past inflection in such examples indicates counterfactuality, not anything temporal. As noted by Mitchell (1985), ". . . unreality in OE is timeless; unlike Latin and MnE, OE does not distinguish grammatically between unreality in the past, present, or future" (p. 805). Presumably, this was because the language lacked the morpho-syntactic means to express a distinction: i.e. the *have* perfect had not yet developed fully. When the *have* construction did develop into a real perfect around 1300, it started to be used to clearly mark past counterfactuals. As we saw above, the construction with *be* was never

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[9]The periods in the first column cover the following dates: M1 1150-1250; M2 1250-1350; M3 1350-1420; M4 1420-1500; E1 1500-1569; E2 1570-1639; E3 1640-1710.

[10]The marked dip in *be* in the M2 period is due to a corresponding dip in the frequency of perfects with *come*. There are only 11 such examples in M2, versus 71 in M1 and 116 in M3.

used to do this, irrespective of the verb involved. Crucially then, it is not the case that *have* pushed into *be* territory here. Rather, *have* has taken over territory that is new for the periphrastic tenses. The long period of apparent variation between *have* and *be* with verbs like *come* is thus just the time when the resultative with *be* was still productive alongside the innovative perfect with *have*.

Why the resultative with *be* was subsequently lost a few centuries later is an independent matter. We consider it to be the most pressing open question in this area, and thus it is the focus of our current research on these periphrastic constructions in the Late Modern English period.

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