



## *Once and Twice*

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### Abstract

The study of English *once* and *twice* yields evidence that each of them is actually a complex phrase containing two visible morphemes and one silent one. Neither is a simple lexical item. The *-ce* morpheme is akin to a postposition, despite English being primarily prepositional. The silent element associated with *once* and *twice* is a silent counterpart of *time*, represented as TIME. This instance of TIME is singular, even in the case of *twice*. There appears to be a link between TIME and the syntax of classifiers.

The presence of silent TIME with *once* and *twice* indirectly provides evidence for the presence in the human language faculty of other antecedentless silent nominal elements such as NUMBER. Silent elements of this sort are not visible (even via an antecedent) in the primary data available to the learner. Their properties, for example, their singularity or plurality and their licensing conditions, therefore provide us with a privileged window onto the invariant core of the language faculty itself.

The presence of silent elements such as TIME and NUMBER can, in part, be traced back to a principle of compositionality, to the effect that the human language faculty imposes a maximum of one interpretable syntactic feature per lexical item.

### Keywords

time, silent, classifier, compositionality, interpretable

## 1. Introduction

Although the correspondence is obviously close between (1) and (2),

(1) We've been there only one time.

(2) We've been there only once.

questions arise as to the way in which the grammar of speakers of English expresses this correspondence. It seems clear that *once* contains *one* as a proper subpart; if so, what is the status of the suffixal *-ce*? It seems equally clear that *once* should be associated with 'time', as in the corresponding *one time*; if so, and if this association is expressed through the presence, with *once*, of a silent counterpart of *time*, namely TIME (I will use capitals for silent elements), what are the properties of TIME?

In this paper, I will pursue the idea that this *-ce* is akin to a postposition, and I will consider evidence that suggests that TIME here must be singular. The latter suggestion is of course straightforward for *once*, less so, and therefore more interesting, for *twice*, to which I will return later on.

## 2. *-ce* as a postposition

The parallelism between (1) and (2) that immediately supports the idea that *once* contains *one*, i.e., that *once* = 'one + *-ce*', involves sentences in which *one* and *once* have a numeral-like interpretation. But the parallelism also holds for cases in which *one* and *once* are not felt to be numeral-like, such as:

(3) We were young once

with distressed *once*, and

(4) We were young at one time

with distressed *at one time*.

The pair of examples (3) and (4) show in addition that *once* can, at least in some cases, correspond to a PP (with P = *at*, in this case). Correspondence with a PP (with P = *on*) also holds between example (2) and the following:

(5) We've been there on only one occasion.

This correspondence with PPs is part of the reason that I will take suffixal *-ce* to be a P (other reasons will follow further on). I will call this *-ce* a postposition simply because *-ce* ends up being preceded by *one*, in the case of *once*. (By antisymmetry, if *-ce* is a projecting head, *one* cannot be in the complement position of *-ce*.) As for the interpretive contribution of *-ce*, it may be neutral between that of temporal *at*, as in (4), and temporal *on*, as in (5); alternatively, or in addition, thinking of its apparent origin as an adverbial genitive,<sup>1</sup> *-ce* may be related to the, for me, archaic *of* found in *of an evening*.

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<sup>1</sup> For discussion, see Jespersen (1961, sect. 18.1).

If we now combine the idea that *-ce* is a postposition with the idea that silent TIME is present, we have as a fuller representation for *once*:<sup>2</sup>

(6) one TIME *-ce*

In (6), ‘one TIME’ is an indefinite phrase. The postposition *-ce* can also be preceded by a definite phrase:

(7) You might help us just this once.

With a definite article, the result is more ‘special’, but possible in at least some English:

(8) They helped us just the once.

The representation for (7) and (8) is:

(9) this/the one TIME *-ce*

That *-ce* is postpositional, in addition to being suggested by the parallelism with temporal *at*, *on*, and *of*, is further suggested by certain discrepancies in behavior between *once* and *one time*. One discrepancy is found in relative clause contexts:

(10) They told us about the one time they thought they were really in danger.

(11) \*They told us about the once they thought they were really in danger.

Despite the possibility of (8), example (11) is appreciably worse, if not completely impossible. The reason, I think, is that the ‘head’ of a relative clause cannot be a PP, whether the P is a postposition or a preposition. This is illustrated by the contrast between (10) and the following:<sup>3</sup>

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<sup>2</sup> In some cases, the postpositional phrase with *-ce* can combine with a preposition:

- (i) We’ll do it at once.
- (ii) For once, they’re telling the truth.  
Note that the *at* of (i) is not exactly the same as the *at* of:
- (iii) At one time, they were in agreement with us.  
which seems closer to *-ce* itself:
- (iv) Once, they were in agreement with us.  
The *at* of (i) seems more like the *in* of:
- (v) We’ll do it in a/one second/minute.  
though the following contrast will need to be accounted for:
- (vi) We’ll do it in two seconds/\*at twice.

<sup>3</sup> Cf. also:

- (i) The \*(place) under the bed where they’re hiding is well-concealed.  
Related to the text discussion is:
- (ii) For every two times you make a contribution,...
- (iii) \*For every twice you make a contribution,...
- with the P of *twice* incompatible with what is probably a relative clause context. Similarly.
- (iv) We liked that film the first two times/\*the first twice (we saw it).

(12) \*They told us about the at one time they thought they were really in danger.

Similarly, one has:

(13) Now I've met the two people you were telling me about.

(14) \*Now I've met the about two people you were telling me.

Furthermore, if Amritavalli and Jayaseelan (2003) are correct to take adjectives to be K(ase)Ps (and if KPs are akin to PPs), then (10) vs. (12) and (13) vs. (14) are paralleled by:

(15) You're not the genius your sister is.

(16) \*You're not the intelligent your sister is.<sup>4</sup>

The restriction seen in (12), (14), and (16) could be stated as a requirement that *the* and other determiners should not take a PP/KP as their complement (or as the Spec of their complement, from the perspective of a raising analysis of relatives), though one would hope to be able to go deeper than that. In any event, it seems likely that the restriction in question, however ultimately understood, will carry over to (11), if *once* is a PP (or perhaps a KP), i.e., if *-ce* is a P (or perhaps a K).

It should be noted that if we 'undo' the relative clause in (10), we get:

(17) They thought they were really in danger (at) that time.

in which an *at* can be pronounced, in a way that recalls:

(18) They thought they were really in danger on that occasion.

In other words, (10) probably contains a silent P associated with *one time*. If so, then either the restriction seen in (12), (14), and (16) must not come into play with

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<sup>4</sup> Although comparatives share important properties with relatives (v. Chomsky (1977)), there are significant differences, e.g.:

(i) You're not as intelligent as/\*that your sister is. In:

(ii) the most intelligent that you've ever been

(iii) the fastest that you've ever run

the adjective or adverb, which is not the target of relativization, has been pied-piped by the (non-PP) superlative morpheme, which is. To some extent, superlative *-est* can pied-pipe a PP, though:

(iv) ?the most on the ball that he's ever been

in a way that indirectly recalls Spanish *lo* in:

(v) Lo a la ligera que hablaría,...

with the PP *a la ligera* ('at the light = lightly, cavalierly') pied-piped by *lo* (example from Alvarez (1999, 3752)).

Although *woody* and *wood-like* seem close, they differ in a way that needs to be accounted for:

(iv) woodier, woodiest

(v) \*wood-liker, \*wood-likiest

silent Ps, or, more likely, the silent P in (10) has been stranded within the relative clause.<sup>5</sup>

The PP character of *once*, with P = *-ce*, is also relevant to the following contrast, I think:

(19) He's going to be just a one-time champion.

(20) \*He's going to be just a once champion.

The idea is that compound-like phrases such as *one-time champion* disallow Ps, as seen in:

(21) He's a former champion.

(22) \*He's an at one time champion.

where (22) also contrasts with the non-compound-like:

(23) He was a champion at one time.

In other words, (20) is excluded parallel to (22), supporting the proposal that *once* contains a P.

### 3. *Twice*

The facts of the preceding paragraph are mimicked, to my ear, by corresponding facts with *two time(s)* vs. *twice*.<sup>6</sup>

(24) He's going to be just a two-time champion.

(25) \*He's going to be just a twice champion.

suggesting, not surprisingly, that the *-ce* of *twice* has the same postpositional status as the *-ce* of *once*. Put another way, (25), like (20) and (22), runs afoul of the restriction barring PPs from appearing within compounds.<sup>7</sup>

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<sup>5</sup> The stranding of a silent P may also be at issue in:

(i) a five-thousand dollar car  
if:

(ii) This car is just \$5000.  
contains a silent AT.

<sup>6</sup> And similarly for archaic *thrice*:

(i) He's going to be just a three-time champion.

(ii) \*He's going to be just a thrice champion.

whose *-ce* is certainly the same morpheme as the *-ce* of *once* and *twice*.

Despite being archaic relative to my English, *thrice* displays differential behavior in:

(iii) ?They were thrice criticized.

(iv) \*They were criticized thrice.

<sup>7</sup> Note the contrast with the non-compound example:

(i) Twice winner of the Open, Mary...

It is worth noting that the fact that *time* in (24) must be singular:<sup>8</sup>

(26) \*He's going to be just a two-times champion.

reflects a widespread restriction (in my English) concerning 'compounds', e.g.:

(27) You're an avid newspaper(\*s)-reader, I see.

Moreover, the very fact that *two-time* is possible in (24) leads to the possibility that the silent TIME associated with *twice* (exactly as TIME is associated with *once*) is actually singular rather than plural; in other words, *twice* might have the representation:<sup>9</sup>

(28) *twi*- TIME -*ce*

I will return to this question shortly.

Before doing so, let me note that *twice* also mimics *once* with respect to the relative clause facts of (10) and (11):

(29) They told us about the two times they thought they were really in danger.

(30) \*They told us about the twice they thought they were really in danger.

As in that earlier discussion, the proposal is that (30) is excluded because the 'head' of a relative clause cannot be a PP, which *twice* is, as in (28), with P = '-ce'. (Again as in the earlier discussion, if (29) contains a silent P, then either the

<sup>8</sup> I have the impression that at least some British English allows -s in some such cases more readily than my English does. The details of this cross-English difference need looking into.

<sup>9</sup> Not important for the present discussion (though interesting in its own right) is the question whether the 'twi-' here is one morpheme or two. The same question arises with *twin*, *twenty*, *twelve*, *two*, and *between*. What is clear is that the 'tw-' of *twice* is identical to the 'tw-' of the other forms. (The non-pronunciation of the 'w' of *two* is in all likelihood predictable from general properties of English phonology.)

Worth noting is that the very close link between *twice* and *two times* is not limited to cases in which *time* is akin to *occasion*, given:

(i) This car is worth at least two times/twice what that car is worth.

(ii) This car is two times/twice as valuable as that one.

Gathercole (1981) has noted:

(iii) John is two times/\*twice older than his son.

Her proposal in terms of contraction (and rightward movement) has a problem with:

(iv) He's older than his son.

Alternatively, there's a link to:

(v) John is older than his son by ??two times/\*twice.

which may be due to the necessary presence of a postposition here with *twice*, but not with *two times*.

On the other hand, we have:

(vi) Nobody should two-time their spouse.

(vii) \*Nobody should twice their spouse.

arguably because *two time* as a (rather complex) verb has an analysis involving 'two N at a time', in which *two* is not a modifier of *time*, but rather of a silent N that may be classifier-like (PERSON) in a way comparable with TIME, as discussed later.

restriction in question fails to apply to silent Ps, or, more likely, the silent P in (29) has been stranded.)

#### 4. The singularity of TIME.

Coming back now to the question of singular TIME in (28), we can note that its being a component of *twice* (as opposed to plural TIMES being a component of *twice*) receives support from:

(31) Two times are enough.

(32) Two times is enough.

vs.

(33) \*Twice are enough.

(34) Twice is enough.

*Two times* allows plural agreement in such sentences (in addition to allowing singular agreement). *Twice*, on the other hand, allows only singular agreement. This must reflect the fact that *twice* contains singular TIME, as in (28), and that *twice* cannot contain plural TIMES.<sup>10</sup>

A further consideration pointing in the direction of singular TIME for *twice*, rather than plural TIMES, comes from facts related to those discussed earlier in (7) and (8) concerning (*just*) *this/the once*. An initial complication, however, arises from the fact that my English strongly resists combining *twice* with a definite determiner. I do not accept the following, though I have seen written examples of this sort:

(35) \*You should have done it just the twice.

More important, though, for the present discussion are comparable examples with demonstratives. I find the following contrast:

(36) \*?You could have done it just that twice.

(37) \*You could have done it just those twice.

with the singular demonstrative not quite as bad as the plural demonstrative, in a way that gives comfort to the view that *twice* contains singular TIME.

A second, rather interesting, complication arises when we consider other instances in (some kinds of) English in which a numeral takes a singular noun. Here I have in mind (monetary) phrases like *five pound*, which are not possible for me, but are possible for Neil Myler (p.c.), who has the following set of judgments:

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<sup>10</sup> Note the contrast with:

(i) Fifty head of cattle are enough.

in which the plural verb is presumably keyed to the plural lexical noun *cattle*, no counterpart of which is present with *twice*.

(38) Five pounds are/is enough.

With plural *pounds*, either plural or singular agreement is possible for him (as well as for me) in this kind of sentence. Whereas with singular *pound*, he has:

(39) Five pound is enough.

(40) \*?Five pound are enough.

The fact that *five pound* for him favors singular agreement here is of some interest. Of even more interest to the present discussion is the fact that he finds (40) slightly less bad than (33), which tried to have plural agreement with subject *twice*. This difference for him between \**Twice are...* and \*?*Five pound are...* may be related to his accepting:

(41) He'd better give us back those five pound by next week.

in which, in the presence of a numeral, singular *pound* is compatible with plural *those*. Yet for him a plural demonstrative with *twice* is marginal (for me, *those twice* is sharply out, as in (37)):

(42) (??)We could have agreed (just) those twice.

Moreover, adding *those* to a sentence like (40) appreciably improves, for him, the status of plural verb agreement:

(43) ?Those five pound are enough (to buy lunch with).

This improvement, i.e., the contrast for him between (43) and (40), recalls phenomena discussed in Collins and Postal (2012), den Dikken (2001), Kayne (1972), and Pesetsky (2014). Adapted to (43), the proposals in those works suggest the following (for the relevant speakers). In (39), the phrase *five pound* contains no plural morpheme at all.<sup>11</sup> A plural morpheme can, however, be introduced above *five pound*, if a demonstrative is merged, too. That allows (41) and also (43) (though why (43) is not perfectly acceptable remains to be accounted for). Only very marginally can a plural morpheme be introduced above *five pound* even in the absence of a demonstrative, to yield (40).

We can now return to the comparison between *five pound* and *twice* (with the analysis 'twi TIME -ce'), both of which contain a singular noun in the context of a numeral. The question is why (33), repeated here:

(44) \*Twice are enough.

is worse than (40). A possible answer is that the contrast can be traced back to the difference between the silence of TIME and the non-silence of *pound*. Thinking of Kayne's (2006) proposal that silent elements are never in exactly the same position

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<sup>11</sup> Presumably, this is equally true of compound-like examples such as:

(i) a five-pound book



that their overt counterparts end up in, it may be that TIME, in the case of *twice*, actually occurs preceding *twi-*, i.e., that (28) should be replaced by:<sup>12</sup>

(45) TIME *twi-* -ce

If so, then the following comes to mind. The (very marginal) merger of the (silent) plural morpheme above *five pound* in (40) that yields (very marginal) plural agreement is available only if the numeral precedes (is higher than) the noun. Since *twi-* does not precede TIME in (45), that merger is blocked, yielding the sharper unacceptability of (44).

This must hold in sentences like (44) in which *twice* is not associated with a demonstrative. When a demonstrative is present, Neil Myler (p.c.) to some extent accepts:

(46) ?Those twice were enough.

indicating much as before that the demonstrative by itself is, with some degree of marginality, sufficient to license a higher plural morpheme even with *twice*.

## 5. The importance of being antecedentless.

TIME is necessarily singular in (45). In (46), a plural morpheme has been merged high in a way dependent on the demonstrative. But TIME itself remains singular even in (46), in a way exactly parallel to the way in which *pound* remains singular in *those five pound* in (41) and (43).

TIME is necessarily singular in (45), i.e., when it is a subcomponent of *twice*. This, however, cannot be a general property of silent TIME as is strongly suggested by the following examples, which are by and large well-formed:

(47) Mary's seen it four times and John five.

(48) We've already been there three times, but we're planning to go another four.

(49) You scolded him three times; (the first) two were enough.

which contrast sharply, in effect, with (44). That is, there is every reason to think that the silent noun in (47)–(49) is plural, just as silent nouns can in general be plural in such contexts:

(50) Mary has written four papers this year, but John has written only three.

(51) Four people I know are interested in your paper, but two are not.

(Note, in particular, the plural agreement licensed by the silent noun in the second part of (51) and (49), again contrasting with (44).)

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<sup>12</sup> Possibly, TIME has reached the position preceding *twi-* via movement.

Sentences like (47)–(51), by showing that the language faculty allows for silent plurals (including plural TIMES), make even more pointed the question why *twice* must contain singular TIME. The key difference would seem to be that the silent plural TIMES of (47)–(49) has an antecedent, namely (overt) *times*. Whereas the silent singular TIME of *twice* does not have any antecedent.

## 6. Classifiers

Continuing to think in terms of ‘silent elements’ rather than in terms of ‘deletion’, to keep open the possibility that Kayne (2006) was correct to deny the existence of deletion operations, we might be tempted to formulate a proposal to the effect that a silent plural is licensable only via an antecedent. This does not seem right, however, given often-noted sentences like:

(52) The very poor are in need of help.

in which the plural verb form indicates the presence of a silent (antecedentless) plural noun.<sup>13</sup>

The absence of an antecedent for the silent TIME of *twice* is therefore not sufficient to account for its obligatory singularity.<sup>14</sup>

Thinking of our earlier discussion centering on (39)–(43) of the (partial) parallelism between *twice* and *five pound*, with singular *pound*, it seems likely that a(nother) relevant factor distinguishing *twice* from *the very poor* is the presence within *twice* (and within *once*) of a numeral. The relevance of the numeral subpart of (*once* and) *twice* is brought out by the following consideration. Although the possibility of having a singular noun with a numeral in sentences like (39)–(43) is limited to some varieties of English (not including mine), much more widespread (and perhaps pan-English) is the possibility of numeral + singular noun in compound-like structures such as in:

(53) They’re caught up in a three-year old quarrel.

(54) That three-year old quarrel of theirs has got to stop.

At least in my English, a singular here is the only option:

(55) \*They’re caught up in a three-years old quarrel.

(56) \*That three years-old quarrel of theirs has got to stop.

Yet I accept:

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<sup>13</sup> Note the difference between *the very poor* and:

(i) They have two four-year olds.

in which the plural -s is not silent, even in the presence of a silent N.

<sup>14</sup> This point is reinforced by:

(i) Three times are enough, whereas twice is/\*are not.

(57) They're caught up in a years old quarrel.

(58) That years old quarrel of theirs has got to stop.

with the interpretation that the quarrel in question is quite a number of years old. This interpretation disappears if plural *years* here is replaced by singular *year*:

(59) They're caught up in a year-old quarrel.

(60) That year-old quarrel of theirs has got to stop.

In these, with *year-old quarrel*, the quarrel must be only one year old.

I conclude, then, that singular *year* in (53) and (54) is licensed in my English in part by the compound-like structure (to distinguish (53) and (54) from (39)–(43)), but also in part by the preceding numeral, to allow (53) and (54) while prohibiting (59) and (60) from having the interpretation of (57) and (58). This conclusion, combined with the parallelism between *twice* and *five pound* (and now with *three year*), leads in turn to the following proposal:

(61) A necessary condition for silent TIME in *twice* and *once* is the presence of the numeral itself (*two*, *one*).

If we now ask why (61) should hold, we are led, I think, to (numeral) classifiers.

The reason is that some languages clearly show that (a noun corresponding to) *time* has classifier-like behavior even when in English one would have thought it an ordinary (non-classifier-like) noun. This classifier-like behavior of *time* is discussed in recent work by Cinque (2013) and Simpson (2005), most strikingly for Thai and Khmer, which normally have 'N Num Clf' order, yet with numeral + 'time' have the order 'Num time', as if 'time' itself is a classifier, rather than the order 'time Num'.<sup>15</sup>

These considerations lead, then, to:<sup>16</sup>

(62) Antecedentless silent TIME is necessarily classifier-like.

which converges with the proposal in Kayne (2003a) that the silent YEAR found in English in:

(63) At the age of seven, Mary could already speak three languages.

is a classifier. If TIME and YEAR in *twice* and in (63) are classifiers, and if

<sup>15</sup> In English, overt *time* would appear to fairly straightforwardly act in a classifier-like fashion for those speakers (myself not included) who accept *sometime else*.

<sup>16</sup> Consideration of the question whether all antecedentless silent nouns must be classifier-like is beyond the scope of this paper.

classifiers are universally not pluralizable,<sup>17</sup> then it will follow that TIME and YEAR in these cases must be singular, as argued earlier for TIME (and as suggested in Kayne (2003a) for YEAR).

## 7. Licensing conditions

Antecedentless silent TIME is not always licensed in the presence of a numeral:

(64) Mary is a two\*(-time) Olympic champion.

Not surprisingly now, a parallel restriction holds for antecedentless silent YEAR:

(65) John's seven\*(-year) stretch in prison is coming to an end.

Comparing (65) with (63), one might think that a left-branch-type restriction is at issue, with YEAR impossible in (65) by virtue of being contained within a left branch (and similarly for TIME in (64)). However, further evidence casts doubt on the viability of a left-branch restriction.

Consider this baseball-related example:

(66) The Yankees won the game with two home runs in the seventh (inning).

This contrasts with:

(67) The Yankees won the game with two seventh \*(inning) home runs.

in which *inning* is not allowed to remain silent. The restriction seen in (67) might again appear to be a kind of 'left-branch' constraint, but that cannot be exactly right, given the quite acceptable:<sup>18</sup>

(68) The Yankees won the game with two top of the seventh home runs.

in which silent INNING is much more readily available than in (67). It seems, instead, that silent INNING is favored by the greater amount of syntactic structure associated with 'top of the seventh INNING' in (68) as compared with just 'seventh INNING' in (67).

This in turn is reminiscent of the well-known pair:

(69) John criticized him.

(70) John criticized himself.

Kayne (2002) proposed, as part of an attempt to account for the existence of reflexives

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<sup>17</sup> At least classifiers of this sort. For some apparent exceptions to the general statement, see Aikhenvald (2000, 249n). Relevant here is the contrast within English between:

(i) two hundred head of cattle and  
(ii) two hundred piece\*(s) of furniture

<sup>18</sup> The word *top* in this example modifies a silent counterpart of *half*:

(i) two top HALF of the seventh INNING home runs

in the language faculty, that the extra DP structure associated with *self* provides an additional (A-bar- like) position in (70) that *John* can avail itself of in the course of moving from within the complex doubling DP containing *him* (but not *self*) up to the subject theta position associated with *criticize*. In partially similar fashion, we can now take *top of the seventh* in (68) to make available to INNING a specifier position not available to it in (67), with that specifier position a necessary component of the derivational silence of INNING, along the lines of Kayne (2006).

In the same way, TIME in (64) and YEAR in (65), by virtue of not having access to the required specifier position, will fail to be licensed.

Returning to *twice*, it must now be the case that the silent TIME that is part of *twice* does have access to an appropriate specifier position, presumably one whose presence is made available by the presence of the postposition *-ce*.<sup>19</sup>

I note in passing that a rather different kind of licensing question arises if we ask why *once* and *twice* by and large lack (in contemporary English) a counterpart based on *three*, i.e., if we ask why *thrice* has become archaic, and if we further ask why no English (that I know of) has ever had a counterpart of *once* or *twice* based on a numeral higher than *three*. There must in all likelihood be a link to the fact that *one*, *two*, and *three* are also special in English in having the corresponding ordinals *first*, *second*, and *third*, rather than the usual ordinal formation with suffixal *-th*, as in *fourth* and higher.<sup>20</sup> (The fact that *thrice* has become archaic may be related to the fact that *first* and *second* are suppletive,<sup>21</sup> whereas *third* is only partially irregular.) In a more general way, all of this must be connected to the widely attested special behavior of low numerals,<sup>22</sup> but I will not pursue this question any further.

<sup>19</sup> Cf. the effect of P on French relative pronouns as discussed in Kayne (1994, sect. 8.2); also the effect of P on Italian reflexives discussed in Kayne (2003b, sect. 13).

<sup>20</sup> Apart from higher additive ordinals such as *twenty-first*, *twenty-second*. Left open is the contrast between these and (ii):

(i) We've been there twenty-one/two times.  
 (ii) \*We've been there twenty-once/twenty-twice.  
 unless singular TIME is incompatible with 21 or 22, etc.

<sup>21</sup> For relevant discussion, see Barbiers (2007), whose interesting proposals concerning \**oneth* lead to the question what exactly distinguishes it from *once*.

<sup>22</sup> Cf. Pesetsky (2014) and references cited there for recent discussion of Russian Case. Note in addition that *couple* and *pair*, despite their interpretation, cannot mimic *two* here, insofar as:

(i) They arrived late a couple/?pair of times.  
 have no corresponding:  
 (ii) \*They arrived late (a) couple-*ce*/pair-*ce*.

The lack of a counterpart to *twice* with *four* and higher is probably crucially mediated by *-ce*, in particular since YEAR in *At the age of seven*,... is perfectly compatible with higher numerals. Possibly, the absence of *once* or *twice* in French and various other languages reduces to the absence of a postposition with the properties of English *-ce*; a plausible conjecture would be that a counterpart to *-ce* will be lacking in any language that otherwise entirely lacks postpositions.

## 8. More on adpositions and TIME.

The idea suggested two paragraphs back to the effect that TIME with *twice* is in part (indirectly) licensed by postpositional *-ce* receives support from other cases of TIME involving adpositions. One striking case has to do with *soon*. Consider:

(71) We'll be there soon.

which has an interpretation involving time such that *soon* appears to pick out a certain point or interval of time. Yet adding overt *time* to *soon* here yields a sharply unacceptable example in:<sup>23</sup>

(72) \*We'll be there at a soon time.

which, however, contrasts with:

(73) ?We'll be there at the soonest time possible.

(74) ?You showed up at too soon a time.

The relative acceptability of (73) and (74) supports taking (71) to contain an instance of silent TIME, as well as a silent AT that will play a role in its licensing.<sup>24</sup>

The difference between (73) and (74), on the one hand, and (72) on the other recalls the discussion in Kayne (2007) of facts concerning *few* and *number*:

(75) John has written (a) few papers this year.

(76) \*John has written (a) few number of papers this year.

(77) ?John's the student who's written the fewest number of papers this year.

(78) ??John's written too few a number of papers to qualify for a grant.

in which it was proposed that (75) contains silent NUMBER.

*Soon* and *few* are modifiers of *time*/TIME and *number*/NUMBER, respectively. For some reason (yet to be discovered),<sup>25</sup> *soon* and *few* can modify overt *time* and *number* only if *soon* and *few* are raised sufficiently high in the DP, as can happen with *too soon* and *too few* (as shown by the following indefinite article),<sup>26</sup> and also with superlatives, as suggested for English by:

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<sup>23</sup> My English does not allow *soontime(s)*, but there are attestations that may ultimately strengthen the text argument.

<sup>24</sup> Silent adpositions might at first glance look very different from Larson (1985), but that would change if KP and PP are indeed close.

*Soon* itself, whose interpretation is close to that of *short* in time contexts, may well also be accompanied by silent FROM NOW/THEN, thinking of sentences like:

(i) We'll be there a short time from now.

<sup>25</sup> Part of the reason might be that *time* and *number*, being classifier-like, are high in the DP to begin with.

<sup>26</sup> Cf. Hendrick (1990).

(79) They're the best of friends.

(80) \*They're good of friends.

and cross-linguistically by the fact that Persian generally has prenominal adjectives only in the case of superlatives.<sup>27</sup> If *soon* and *few* cannot raise sufficiently high, overt *time* and *number* must give way to silent TIME and NUMBER, as in (71) and (75).

## 9. More on postpositions in English.

English is normally thought of as a prepositional language. Yet if I am correct in taking the -*ce* of *once* and *twice* to be a postposition, then English has at least one postposition. Thinking of Dutch and German,<sup>28</sup> there is nothing surprising here. Let me, however, briefly touch on further examples of postpositions in English.

One well-known case is that of:

(81) We have a plan whereby we will read everything a day early.

*Whereby* here is related to *thereby*, *hereby*, *therefore*, *forthwith*, *whereupon* and probably *whence*, *thence* and *hence*, with *whereby* perhaps being the closest to colloquial English. Somewhat similar is:

(82) His whereabouts are unknown.

with *about* arguably an adposition.<sup>29</sup>

More surprising, perhaps, is:

(83) We don't have the wherewithal to do it.

in which *with* is postpositional relative to *where*. Although *wherewithal* lends itself to being called 'idiomatic', pieces of an analysis readily come to mind. The -*al* is *all*. The definite article in (83) recalls that found overtly with *whole*, as well as recalling the fact that *all* is non-initial in:

(84) He gave it his all.

in which there is arguably a silent definite article. In the manner of Dutch and German, *wherewith* corresponds to *with what*,<sup>30</sup> with the result that (83) can be thought of as very close to:

(85) \*We don't have the all with which to do it.

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<sup>27</sup> Cf. Moshiri (1988, 24) and Ghomeshi (1996, 145).

<sup>28</sup> Cf. for example Noonan (2010).

<sup>29</sup> The plural here suggests the possibility of a silent PLACE, thinking of:

(i) ?The places where he is about are unknown.

<sup>30</sup> Cf. van Riemsdijk (1978) and work stemming from his.

even though this sentence is not acceptable. The fact that *wherewith* precedes *al(l)* in (83), whereas *with which* follows *all* in (85) suggests that in (83) *wherewith* has raised past *al(l)* in a way related to the way in which *destruct-* (remnant-)raises past *-ion* in the relative clause approach to derived nominals suggested in Collins (2006) and Kayne (2008).

Furthermore, some speakers of English, in particular Bob Frank (p.c.), accept some sentences like:

(86) What about were you guys talking?

(87) Who to are you hoping to talk about that?

(88) Who from are you convinced that John stole the idea?

in which *about*, *to* and *from* look postpositional.<sup>31</sup> Possibly, English adpositions are postpositional in the same way in sluicing examples like:

(89) I knew they were talking, but I wasn't sure what about.

as is suggested by Bob Frank sharply rejecting:

(90) \*What topic about were you guys talking?

with a *wh*-phrase containing a lexical noun, just as in sluicing:

(91) \*I knew they were talking, but I wasn't sure what topic about.

As a final example of an English postposition, we might think of *ago*, or, more likely, of the *a-* of *ago*, especially if the following two sentences are closely related:

(92) They left three days ago.

(93) It's going on three days since they left.

with *a-* in (92) corresponding to *on* in (93), with *go* in (92) corresponding to *going* in (93), and with *three days* in (92) preposed to adpositional *a-* in a way that has something in common with postpositions.<sup>32</sup>

## 10. A further instance of TIME.

Alongside (92) one also has:

(94) They left a long time ago.

(95) They left long ago.

<sup>31</sup> For Bob Frank, the first of these three is the most fully acceptable.

<sup>32</sup> For relevant discussion of postpositions, see Kayne (2003c).



It is hard to see how (95) could fail to contain TIME.<sup>33</sup> A related use of *long* (but one that shows polarity behavior in the absence of overt *time*) is found in:

(96) You haven't been here very long.

Again, there is presumably a silent TIME. In all likelihood there is also a silent adposition in (96), given the strong similarity to:

(97) You haven't been here for a very long time.

An interesting challenge is to understand why TIME is not compatible with the indefinite article:<sup>34</sup>

(98) \*They left a long ago.

(99) \*You haven't been here a very long.

It may be that this is just the same fact—see Kester (1996)—as:

(100) Mary has written a long paper and John has written a long \*(paper), too.

Alternatively (or in addition), there is a link to the fact that French *longtemps* ('long time') is compatible with the absence of an indefinite article:

(101) Marie est restée longtemps à Paris. ('M is remained longtime in P')

## 11. Conclusion

Both *once* and *twice* are complex phrases (containing two visible morphemes and one silent one), rather than simple lexical items. The presence of silent TIME with *once* and *twice* (and in other cases mentioned) indirectly reinforces the presence of other antecedentless silent elements in the human language faculty. Since silent elements of this sort are not visible (even via an antecedent) in the primary data available to the learner, study of their properties, for example of their singularity or plurality, and of their licensing conditions, provides us with a privileged window onto the invariant core of the language faculty itself.

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<sup>33</sup> Similarly, Tsoulas (2013) has argued that *before* can be followed by TIME; Zamparelli (2004) had suggested TIME for *every two days*; TIME is clearly called for in the shorter version of:

(i) We'll be there in two hours' (time).

as well as with *often*, given *oftentimes*. (Whether *often* has TIME or TIMES needs to be looked into further.) In addition, Purves (2002, 30) notes that Scots uses *this*, *that* and *yon* for *this/that/yon time/place/person*.

<sup>34</sup> Another involves:

(i) They left long/\*short ago. and, conversely:

(ii) They left shortly/\*longly before noon.

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## *Once* 和 *Twice*

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### 提要

本研究的證據顯示，英語 *once* 和 *twice* 實際上是一個包含兩個可視語素和一個無聲語素的複雜短語，兩者都不是簡單的詞項，當中的 *-ce* 語素類似後置詞，雖然英語以前置詞為主。*once* 和 *twice* 的無聲成份是時間成份，以 *TIME* 來表示。這個 *TIME* 是單數成份，即使用於 *twice* 當中也如是，而 *TIME* 與量詞句法似乎有一定的關聯。

無聲的 *TIME* 出現在 *once* 和 *twice*，間接證明了其他諸如 *NUMBER* 等沒有先行語的無聲名詞性成份，存在於人類的語言機制之中。這一類無聲成份不論有沒有先行語，均隱現在學習者的基礎語料中，其特性（如單數性、複數性及允許條件等）猶如一扇特意打開的窗，讓我們窺見語言機制中恆定的核心。

無聲成份 *TIME* 和 *NUMBER* 的出現或多或少可以追溯到分解原則之上，即人類的語言機制要求每個詞項最多只能有一個可解的句法特徵。

### 關鍵詞

時間，無聲成份，量詞，分解性，可解性