

Abstract

Sentences such as *The train may arrive any minute (now)* have a special non-universal interpretation. Similar types of sentences exist in Dutch, French, Spanish and elsewhere. I argue that they constitute a special construction, involving a universal quantifier, a temporal noun, optionally a preposition (in some languages), an achievement predicate and a modal context. Other properties are negative: The construction may not be negated, and the temporal noun may not be modified. I discuss the origin of the construction in contexts of expectation, using corpus data from Dutch and English, and describe the semantic change from universally quantified statement to claim about the immediate-future as a change by which an implicature becomes the main assertion.

IMMEDIATE-FUTURE READINGS OF UNIVERSAL QUANTIFIER CONSTRUCTIONS

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1. Introduction¹

The expression of statements about the future, including the immediate future, has played an important role in the field of grammaticalization studies (Lehmann 1982, Hopper and Traugott 1993). The development of future tenses from auxiliaries, and that of auxiliaries from main verbs, has been one of the central cases from the beginning. It is well-known that various constructions may also serve to express the future, e.g. English *be about to*, *be going to*, and their ilk.² To this list we may add a construction involving a universal or free choice quantifier, exemplified by (1) below for English:

- (1) The patient may die any day (now).
- (2) The patient may die at any given day.

When we compare (1) with (2), we note that the latter makes a universal claim, whereas the former does not. From (1), we infer that death is imminent, from (2), on the other, that death is always possible. Sentences such as (1) appear to have escaped the scrutiny of linguists, and so the goals of this paper are (a) to provide a detailed account of their syntactic, lexical and semantic properties, (b) to sketch their historical development, on the basis of corpus data³

from Dutch and English, and (c) to compare the English and Dutch cases with data from other European languages. My central claim is that sentences such as (1) should be viewed as instantiations of a special construction, with properties that vary somewhat crosslinguistically, and that the origin of the construction lies in sentences where the difference between immediate-future readings, as in (1), and universal readings, as in (2), is neutralized.

The structure of this paper is as follows: in section 2, I present the main features of the immediate-future construction at hand, in section 3 I present my hypothesis about the origin of this construction, and give an overview of the diachronic data, and section 4 contains the conclusions.

2. The construction

2.1. Choice of determiners

In our origin example (1) above, the crucial quantifier is the free-choice item *any* (cf. Vendler 1967 for the term). Universal quantifiers such as *every* or *all* appear to be excluded:

- (3) The patient may die every day.
- (4) The patient may die each day.
- (5) The patient may die on all days.

The above sentences may either sound weird (implying that the patient dies multiple times), or have a reading similar to (2) above, but what is lacking is the immediate-future reading that is readily associated with (1).

In Dutch, on the other hand, the quantifiers *elk* and *ieder*, which are not free-choice items, but counterparts of *every*, are used in the Dutch counterpart of the immediate-future construction, whereas *alle dagen* ‘all days’ is currently impossible (but, as we will see below, it was once common).

- (6) De patiënt kan elke/iedere dag sterven.

The patient may every day die

‘The patient may die any day’

This is, then, the first constructional aspect: the choice of the determiner is somewhat arbitrary. Whereas English chooses to use a free-choice item, Dutch makes use of universal quantifiers, and moreover, the set of determiners has changed in the course of the last several

centuries. Dutch also has free-choice items, in particular a construction involving *wh*-pronouns (cf. Aguilar Guevara et al., 2010):

- (7) De patient kan welke dag dan ook sterven.
The patient can which day then ever die
‘The patient may die on any given day’

However, as the translation shows, this item is only used with a universal interpretation in such contexts, and does not suggest in any way that the moment of death is near.

German is similar to Dutch in the choice of determiners:

- (8) Der Zug kann jeden Augenblick ankommen
The train can every moment arrive
‘The train may arrive any moment’

Note that the free-choice item *irgendein* ‘any’ (cf. Kratzer and Shimoyama 2002 for some discussion of this item) may not be used in a similar way to express events in the near future:

- (9) Der Zug kann irgendeinen Augenblick ankommen
The train can some/any moment arrive
‘The train may arrive at some moment or other’

Portuguese, on the other hand, appears to allow both free-choice and universal determiners:

- (10) O comboio pode chegar a qualquer momento
The train can arrive at any moment
‘The train may arrive any moment (now)’
- (12) O comboio pode chegar a cada momento
The train can arrive at every moment
‘The train may arrive any moment (now)’

French prefers universal quantifiers:

- (13) Le train peut arriver à tout instant
the train may arrive at every moment
‘The train may arrive (at) any moment’

- (14) Le train peut arriver à n'importe quel moment
the train may arrive at no-matter-which moment
“The train may arrive at any given moment” [No Immediate Future reading]

Differences like those depicted above indicate that the readings are not freely generated in a compositional fashion. Rather, each language imposes slightly different restrictions on the determiners that may be employed by the immediate-future construction.

2.2. Presence of prepositions

There is some cross-linguistic variation regarding the possibility of prepositions in the position preceding the universal or free-choice determiner. In English, it is possible to use *at*, but not other prepositions:

- (15) The train may arrive (at) any moment now.
(16) *The patient may die on any day. [* for immediate future reading]

In my corpus material, 79 out of 330 cases contain *at* (about 24%).⁴ In Dutch, I found 3 cases with the preposition *op* in a total of 1092 (0.3%). The most plausible explanation for this big difference is that for most speakers of Dutch, adding a preposition is not allowed.

The difference between (15) and (16) does not follow from any property of the constituent words and expressions, to the best of my knowledge, and will therefore have to be viewed as an irreducible constructional property: the construction permits, optionally, the addition of a single preposition. This has the advantage that the Dutch case, where (for most speakers) no preposition is allowed, can be handled in a similar way: the set of allowed prepositions is simply empty for Dutch.

2.3. Modifiers

One of the properties of the immediate-future construction is the lack of modifiers of the temporal nouns. We have already seen in example (2), that the adjunct *given* in *any given day* blocks the immediate-future reading that is readily associated with (1). A similar effect can be seen when we compare the following two sentences:

- (17) The volcano may erupt any day
(18) The volcano may erupt any day of the week

The only modifier which is permitted, and which in fact clearly marks the immediate-future reading, is *now*:

(19) The volcano may erupt any day now

The use of this adverb as a post-nominal modifier is certainly peculiar, and not found in e.g. Dutch or German. It must be considered an optional constructional property associated with the construction in English, and might be compared to similarly restricted uses of adverbs as post-nominal modifiers, e.g. English *yet* in superlative constructions (*the fastest train yet*, but not **the fast train yet*). The addition of *now* unambiguously sets the imminent-future construction apart from free choice interpretations.

2.4. Nouns

The nouns that are used by the immediate-future construction are temporal nouns, typically denoting what counts, in the context, as a short period of time. I will call these *contextual minimizers*. For instance, for a train arriving, a relatively short period would be measured in minutes, or less (seconds, moments). On the other hand, the imminent eruption of a volcano or the beginning of a war may be a matter of grave concern, even if it is some days ahead of us. A sentence like *The train will arrive any day now* is either meant sarcastically, or else it would have to be used in a special context, for instance when we are talking about a new train connection for some town, and the first train is about to reach the town in a few days. A clear example of a sarcastic use is to be found in the following example, from an interview with the beat poet Allen Ginsburg:

(20) I am 70 years old. I could kick the bucket any decade now.

The choice of nouns is roughly the same in English and Dutch, but the corpus data show some differences in which nouns are preferred (compare Table 1 below). I don't have anything useful to say about the differences in frequency, except that they appear to be arbitrary, precisely as one would expect from a highly specialized construction. The only systematic difference that I have been able to find concerns the word *tijd*, which simply appears to be used in a different way than its English counterpart *time*. Thus *every time* is not

elke tijd in Dutch, but rather *elke keer* ‘every occasion’, or *telkens*, a syntactically atomic adverb.

Table 1: Nouns used in the immediate-future construction

English	N	Dutch	N
Day	83	Dag ‘day’	21
Decade	2	Decade	-
Hour	-	Uur ‘hour’	5
Instant	1	-	-
Minute	96	Minuut ‘minute’	3
Moment	97	Moment	598
-	-	Ogenblik ‘moment’	465
Month	1	Maand	-
Second	21	Seconde	-
Time	26	Tijd ‘time’	-
Week	3	Week	-
Weekend	1	Weekend	-
Year	1	Jaar	-

2.5. Predicates

The predicates we typically find in immediate-future sentences of the kind studied here denote point-like events, often referred in the literature as *achievements* (Vendler 1967, Dowty 1979). When we look at the English corpus material, this may not seem to be true at all, until we realize that the most common predicate, *be here*, always receives an inchoative interpretation in this construction:

- (21) Your husband will be here any minute.

Consequently, we should view such sentences as locating the point of arrival in the immediate future, which will mark the beginning of a state of the addressee’s husband being here. Static predicates that do not permit an inchoative interpretation are clearly ruled out:

- (22) #Fred will remain in custody any minute now.
 (23) #Fred will be left-handed any minute now.

The English corpus data collected by the author yield the following list of most commonly found predicates, ordered by frequency:⁵

Table 2: Most frequent predicates

Predicate	Frequency
Be here	45
Come (back/here/home)	16
Die (kick the bucket, pass away)	13
Arrive	12
Break out / break through / break loose	8
Erupt	7
Explode	6

The list for Dutch is similar. Most of the predicates are intransitive, and not high on an agentivity ranking.⁶ However, while this is a striking set of predicates, by no means representative of the set of all English predicates, it does not appear that there is an absolute prohibition of transitive verbs with high agentivity. The following examples from the corpus will serve to make this clear:

(24) They're going to cut these lines any second now.⁷

(25) Izetbegovic said Nambiar was to present him a plan at any moment.⁸

From the literature on grammaticalization, it is known that transitivity/agentivity effects may be observed in the development of new constructions (cf. Hopper and Traugott 1993, Bybee et al., 1994), such as the English progressive (Hundt 2004), effects which are significant, but seldom categorical.⁹

2.6. No negation

The immediate-future construction cannot abide the presence of negation. The Dutch and English corpus data do not provide a single instance of a directly negated occurrence, similar to the following made-up examples:

(26) #The train may not arrive any minute now.

- (27) #De train kan niet elk moment arriveren.
The train can not every moment arrive
“The train can’t arrive any moment”

Note that there is nothing semantically odd about denying that an event is about to take place. So the anomaly of the above sentences must be due to something else. I would like to claim that the construction at hand is a positive-polarity item, and for that reason shuns direct negation.¹⁰ Note that negation in a higher clause is fine, as is negation in questions and conditionals (similar examples could be given for Dutch):

- (28) a. I don’t think the train will arrive any moment now.
b. Shouldn’t the train arrive any moment now?
c. If the train is not to arrive any minute now, we better look for alternatives.

The literature on positive-polarity items notes that they are acceptable in precisely these conditions (Baker 1970, Ladusaw 1979). See Hoeksema (2010) and Hoeksema & Napoli (2008) for more examples of constructions that are positive-polarity items. Positive-polarity status may explain why the negative-polarity auxiliaries *hoeven* ‘need’ and *need* do not show up among the modal verbs that create the intensional contexts typical of the immediate-future construction (cf. De Haan 1998, van der Wouden 2001 for discussion of these modal verbs, and section 3 below for an overview of modal contexts).

2.7. Intensional contexts

The contexts in which the immediate-future construction can be found are highly restricted. Usually, there is a modal verb in the same clause, or a propositional-attitude verb such as *expect*. Such contexts are referred to in the semantics literature as *intensional* or *opaque* (see e.g. Dowty, Wall & Peters 1981). As a matter of fact, not all intensional contexts are acceptable. Take for instance the sentence *The train may arrive any minute*. This sentence has a clear epistemic (“possibility”) reading that is compatible with an immediate-future interpretation, but lacks a deontic (“permission”) reading, according to which permission was granted for immediate arrival. On the other hand, a universal interpretation of the quantifier is easy to combine with a deontic interpretation of *may*, as in *Trains may arrive any minute of the day, except between 2 a.m. and 6 a.m. when the station is closed*. There is a general restriction of the immediate-future construction to epistemic readings of modals, both in Dutch and English, and presumably this holds for other languages as well.

Regarding propositional-attitude verbs, the ones that show up most are *expect* and its negative counterpart *fear*: *Anne expects to find the solution any day now*. As one may expect, all contexts are future-oriented. In the next section, we will take a look at our corpus data and suggest an explanation for the origin of the immediate-future construction.

3. Origin of the construction and diachronic developments

One of the problems in studying the immediate-future construction is the difficulty of finding clear-cut criteria for deciding whether a given sentence instantiates the construction. This problem is especially acute when we try to establish the actuation point of the construction. I offer the following sentences as potential early instantiations of the construction in English (I have been unable to find any clear examples with *every* after the 19th century):

- (29) I expect every minute to hear how my poor wife do.¹¹
- (30) I expect Cavallier here every day now, and though I hope that his Royal Highness will take him into his service¹²
- (31) I expect him every minute¹³
- (32) I expected them every moment to snap in twain¹⁴

Such examples show that the original determiner need not have been *any*, and given the Dutch or German data, discussed above, we can be sure that a regular universal determiner, such as *every*, would have done just fine. Why *any* took over is not entirely clear, but note that the modal contexts in which the immediate-future construction is most frequently found have a particularly strong affinity with free-choice *any* (Vendler 1967, Carlson 1981, Dayal 1998).

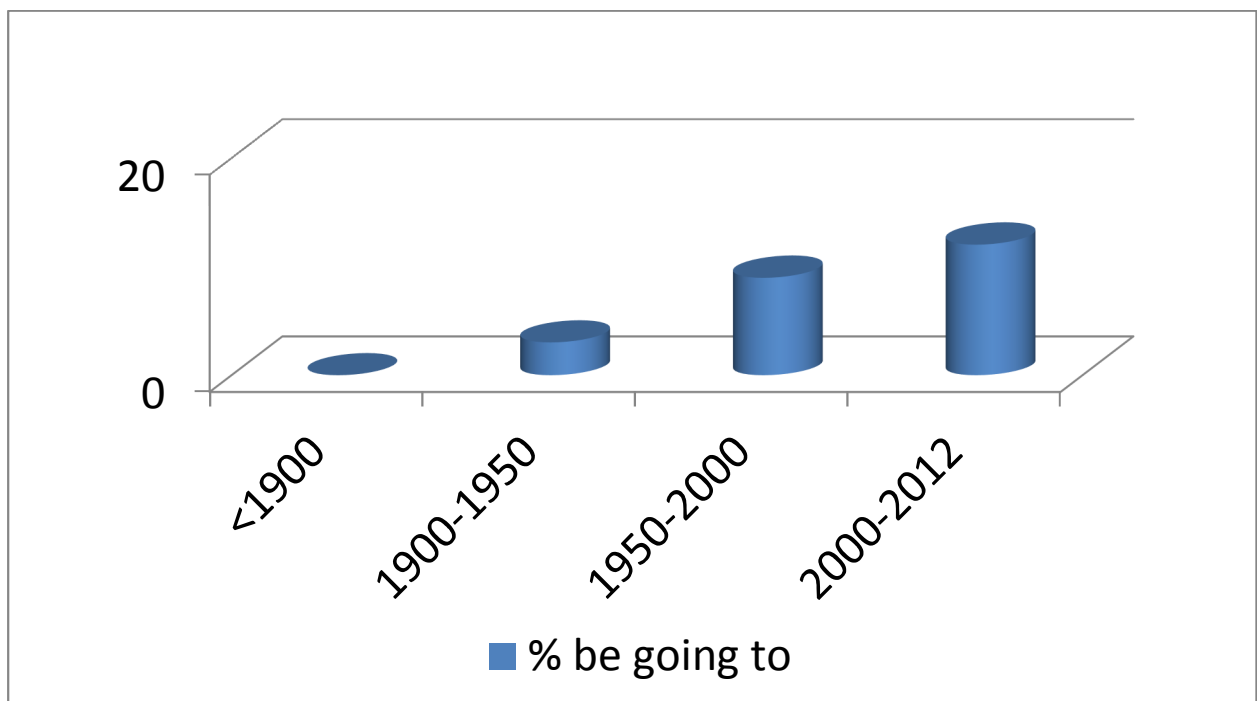
Table 3 below shows the diachronic developments of the contexts for the immediate-future construction in English:

Table 3: Three contexts for the immediate-future construction in English, diachronically.

Period	Expectation	%	Modal	%	Future	%
1650-1750	4	100	-	0	-	-
1750-1850	9	43	12	57	-	-
1850-1950	25	22	83	73	5	4
1950-2010	34	18	132	68	28	14

In the category ‘Future’, we have contexts other than modal auxiliaries (including *will*), modal adjectives (*likely*, *liable* etc.) and expectation verbs that are conducive to an immediate-future interpretation. In particular the complex expression *be going to*, itself a marker of the immediate-future, is commonly combined with our construction. In addition, this category comprises future interpretations of the present and the present progressive, and the expression *be about to*. In figure 1 below, we see the emergence of *be going to* in our corpus material. The rise of this context squares nicely with what we know about the spread of *be going to* as a marker of the near future (Danchev and Kytö 1994). Also included in the category “Other” are future-oriented adjectives, such as *likely* and *apt*, compare *He is likely to die any day now* or *She is apt to breeze in any second*, and the immediate-future expression *be about to*. Semantically, these adjectives are modal in nature, just like the modal auxiliaries.

Figure 1: Occurrences of *be going to* with the immediate-future construction, in percentages.



The Dutch data show a pattern similar to table 3. In table 4 below, we present the diachronic developments in Dutch, as regards the contexts of the immediate-future construction.

Table 4: Dutch contexts diachronically

Period	Expectation	%	Modal	%	Other ¹⁵	%
1650-1750	8	73	-	0	3	27
1750-1850	37	76	11	22	1	2
1850-1950	47	28	118	70	3	2
1950-2010	117	12	835	87	7	1

Let us assume, on the basis of these corpus data, that the origin of the construction lies in contexts of expectation, including fear and hope, which are just negative and positive expectations, respectively. In such contexts, a universally quantified sentence may be reinterpreted as pertaining to the immediate future. Consider for example that you are under constant and permanent fear of a war breaking out. Why would that be? One of the most likely scenarios is that you expect the beginning of the war to be imminent. It seems reasonable to treat perceived imminence as an implicature of constant expectation. The origin of the construction must then lie in a reinterpretation of such structures as directly saying something about the near future. In other words, the original implicature becomes the main proposition (see Traugott & König 1991, Kearns 2010 for discussion of meaning changes involving implicatures). Using a fairly simple formula (see Katz 2001 for a more sophisticated semantics of the temporal aspects of *expect*), we might render this reinterpretation as follows (using the symbol < for precedence and << for immediate precedence):

$$(33) \quad \forall t [\text{expect}(x,t,p)] \longrightarrow \text{expect}(x,t', p) \quad (\text{where } t_0 \ll t')$$

(where the temporal variable *t* is implicitly restricted to a contextually relevant set of times or stretches of time, the length of which is determined by the temporal noun – this in order to distinguish *any moment* from *any day* or *any minute* – and *t*₀ is the utterance time.) After such statements were reinterpreted as being about the near future, the road was open to use the same construction also for modal statements with the future orientation (e.g. statements involving *may* or *can*) and other future-oriented contexts. As we see in Tables 3 and 4 above, this is exactly what happened. At that point, we no longer have a special interpretation of sentences involving verbs of expectation, but a special construction that emphasizes the imminence of some event.

One might ask why the construction did not arise first in modal contexts. Here, a universally quantified statement would entail a statement about the near future, but such an entailment is no different from entailments about any other point in time. So if I claim that the train may arrive at any moment (of the day), then it may arrive soon, or in an hour, or much later. There is no reason to single out the immediate-future from among this range of possibilities. The pragmatic effect that sets expectation-type contexts apart, is, I hypothesize, the conversational implicature that they give rise to. After the conventionalization of this implicature, we have a special construction, which then quickly generalized to other future-oriented contexts.

The modal verbs that constitute the modal contexts are given in Table 4 below, for both English and Dutch.

Table 4: Modal contexts, by modal verb

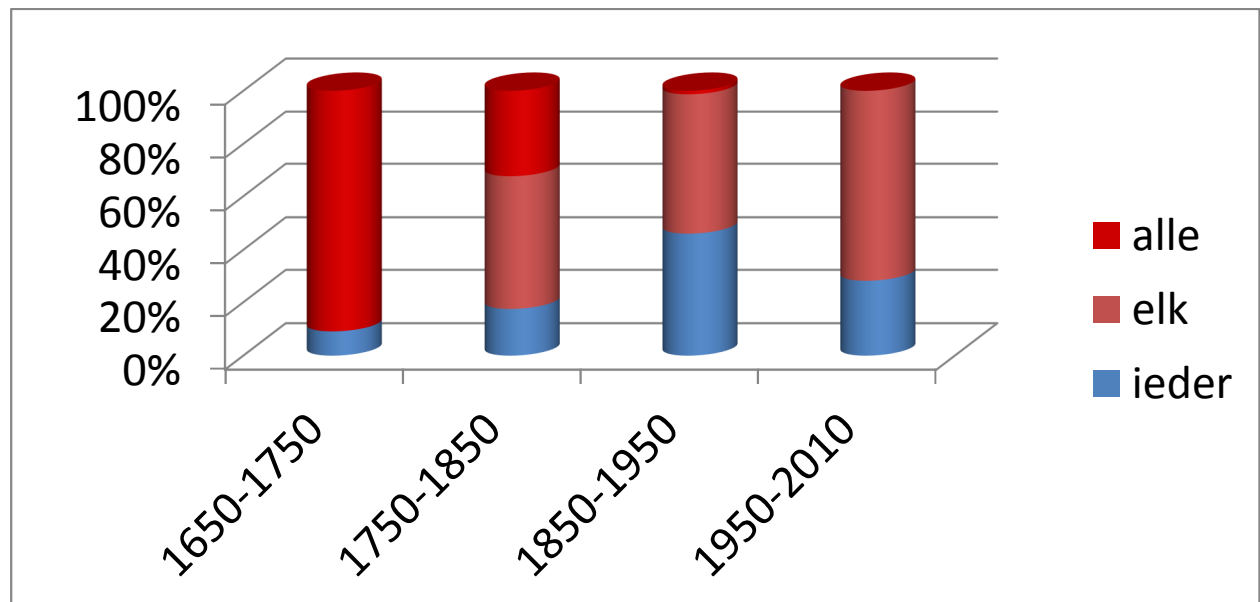
English	N	Dutch	N
Can	1	Kunnen “can”	929
Could	30	Zullen “will”	39
May	46	Moeten “must”	2
Might	35		
Must	5		
Ought	1		
Shall	2		
Should	16		
Will	46		
Would	13		

For the English modals, I have split up present-tense and past-tense forms, as they are clearly semantically divergent (cf. Coates 1983). Double modals do not exist in standard English, but in Dutch, there are fairly common, especially *zou kunnen* ‘should can = might’. These, I have listed under *kunnen*. Perhaps the most striking difference between Dutch and English is the lack of any occurrences of *mogen* ‘may’. The reason for this would seem to be that *mogen*, unlike *may*, does not have a proper epistemic interpretation (cf. Nuyts, Byloo and Diepeveen 2007). *Mogen* does have a (rather rare) non-deontic interpretation in concessive

constructions, but this use does not seem compatible with the immediate-future construction. The verb *kunnen* ‘can’ has largely taken over the epistemic meanings in Dutch that English expresses by means of *may*. The relative scarcity of occurrences in the context of *must* in English (and *moeten* in Dutch) could be related to the observation in Coates (1983: 42) that epistemic *must* usually combines with stative predicates, whereas we have seen that the immediate-future construction requires achievement predicates.

I have argued that the choice of determiners (*any* versus *every* in English, *ieder/elk* versus *alle* in Dutch) is arbitrary, and subject to diachronic change. In Figure 2 below, the main developments in Dutch are depicted, in support of this claim.

Figure 2: Demise of *alle* ‘all,’ rise of *elk/ieder* ‘every’ in the Dutch immediate-future construction



Whether or not the changes in the choice of determiner are related to other changes in the expression of temporal quantification, I have not been able to ascertain. At any rate, there is a certain degree of arbitrariness about the choice of determiners that fits our general assumption that the immediate-future construction should be viewed as a special construction, with its own idiosyncrasies.

4. Conclusions

Dutch, English, German, Spanish and a variety of other European languages all have a special quantificational construction for reference to the immediate future. After sketching the main properties and points of variation for this construction, I presented a hypothesis about its origin, namely that it originated in contexts of expectation and spread from there, and provided diachronic data in support of this hypothesis from English and Dutch. Semantically, I have analyzed the construction in terms of an implicature becoming the main assertion. For English and Dutch, I have not been able to find instances of the construction in medieval sources, making it likely that the construction arose in the early modern period, possibly as a borrowing from French or some other European language. The larger European picture of the spread of the construction remains a matter for future research, as well as the question of whether any non-European languages have developed a similar construction.

Notes

¹ The material in this paper was presented to audiences at the University of Calgary, University of Groningen, University of Amsterdam and ICHL 2011 in Osaka. I owe a debt of gratitude to these audiences, as well as two anonymous reviewers, for comments and critique, and to my informants for their judgments.

² The term *immediate future*, used throughout the paper, has to be understood in a relative way, as denoting events posterior to either the moment of speaking, or the reference time (in the sense of Reichenbach 1947). For example, *The train will arrive any moment now* is a claim about the near future, whereas *The train would arrive any moment now, she feared* is about events that might take place shortly after the reference time. In the latter case, to be sure, we may be talking about events in the past.

³ The corpus data were collected by the author from books, newspapers and magazines, as well as from various Internet sources. The data sets for Dutch and English can be found at the website of the author, <http://www.let.rug.nl/hoeksema/datasets>.

⁴ *At* is most common with *moment* (50 out of 92 occurrences of *any moment* in the immediate-future construction were preceded by *at*). For *minute*, I found 16 out of a total of 91. I found none with *day*. The presence or absence of prepositions in adverbial PPs/DPs is known to be somewhat idiomatic (cf. e.g. Larson 1985).

⁵ In contexts introduced by *expect*, the predicate (*be*) *here* is often implicit, compare: *I expect the ship to be here any day now / I expect the ship here any day now / I expect the ship any day now*.

⁶ This point was raised at the presentation of this paper, by Chris Lucas.

⁷ From John Dean, *Blind ambition*. Simon & Schuster, New York, 1977, page 170.

⁸ From a posting on the Internet newsgroup *soc.culture.turkish*, Febr. 1, 1993.

⁹ To be sure, the English progressive initially shows resistance to nonagentive predicates, whereas the immediate-future construction shows the opposite tendency. The point is that both constructions show sensitivity to the semantic notion of agentivity/transitivity.

¹⁰ One of the anonymous reviewers would like to know *why* the construction at hand is a positive-polarity item. Unfortunately, the literature does not provide any plausible general answers to this question that can be applied to the present case. Positive-polarity status does not appear to be entirely

random (cf. Israel 2011), but neither is it fully predictable. Immediate-future constructions are not necessarily sensitive to polarity. For example, *be going to* is equally fine in positive and negative sentences. On the other hand, *be about to* seems to have a more intentional interpretation under negation. Compare: *He was about to jump* (imminent jump) with *He was not about to jump* (no imminent jump, and lack of intentions to jump).

In the case of English, we might note that free choice *any* does not like direct negation. Compare:

- (i) Mary would do anything to help John.
- (ii) Mary would not do anything to help John.
- (iii) Would Mary do anything to help John?

While example (iii) is ambiguous between a polarity sensitive use and a free choice use, (ii) is not similarly ambiguous (unless we do something special, such as using special intonation or adding the word *just*, cf. Horn 2000). If free choice *any* is a positive-polarity item, this pattern is accounted for, and, moreover, we better understand why the immediate-future construction, arising from free-choice *any*, behaves as a positive polarity item.

¹¹ Diary of Samuel Pepys, entry June 2, 1660.

¹² The diplomatic correspondence of the Right Hon. Richard Hill, letter September 14, 1704.

¹³ Henry Fielding, *Tom Jones*, Random House, New York, 1950 [1st ed. 1749], page 847.

¹⁴ Herman Melville, *Typee. A peep at Polynesian life*, Northwestern and Newberry, Evanston/Chicago, 1968 [1846], page 61.

¹⁵ Two occurrences in the category ‘Other’ for the first period are both of them cases of the immediate-future construction *staan to* ‘stand to’ (compare English: *she stands to inherit a fortune*). While these have a modal flavor, I have decided to list them under ‘Other’ because *staan* is not a modal auxiliary but a main verb. One other occurrence involves the future-oriented participle *aanstaande* ‘impending, imminent.’

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