Temporal prepositions in English and German: 
A contrastive study

Abstract: This paper gives a short overview of the main contrasts in the structure, meanings and uses of temporal prepositions in English and German. It is shown, in particular, that the deictic components of many prepositions and their uses in English (ago, come, since, in, etc.) are absent in their German counterparts. Among the lexical differentiations made in only one language special attention is given to the one between the two prepositions by and until in English, both of which are generally translated by the preposition bis in German. It is shown that this differentiation in English and its absence in German have a number of interesting consequences for the translation of time adverbials from one language into the other.

1. Introduction

Even in official texts written by foreign learners with a high competence in English the following error occurs very frequently:¹

(1) (*Let me have your abstracts until the first of May.

Of course, this sentence is neither ungrammatical nor semantic non-sense. The problem is that it does not express what the writer wants to say, i.e. specify a deadline for submitting abstracts. What the sentence (1) says instead is that the speaker wants to keep the abstracts until the beginning of May, with the additional implication that s/he will hand them back after the date specified. The correct version of what the speaker or writer meant to express is obtained by substituting the preposition by for the preposition until, and the cause of the problem is that neither German nor French – nor many other languages for that matter – have lexical differentiations analogous to the lexical distinction between by and until in English. Both of these expressions correspond to bis in German:

(2) Let me have your abstracts by the 1st of May.
(3) Schicken Sie mir Ihre Abstracts bis zum 1. Mai.

¹ In a recent report of a European research project, whose identity shall not be revealed, this type of error occurred as often as seven times.
The following contrastive study deals with such and other contrasts in the systems of temporal prepositions in English and German. We will analyze their semantic structure, their interaction with tenses and their typical polysemies in the two languages. It will be shown that in addition to the expected range of parallel distinctions and structures in the two genetically related languages we also find a large number of contrasts, whose juxtaposition provides new insights into the relevant subsystems of both languages. Whenever this is possible and useful our comparisons will also include other languages and thus present a more general picture. After some introductory remarks on basic properties of prepositions we will first make an attempt to subclassify temporal adverbs and the prepositions that may form part of them and then go on to discuss a few contrasts, in particular the major stumbling block in the correct use of temporal prepositions in English, viz. the contrast between *by* and *until* as translational counterparts of German *bis*.

### 2. Some introductory remarks about prepositions

Prepositions are generally regarded as one of the major lexical categories, together with nouns, verbs and adjectives (cf. Chomsky 1970). Like these other three lexical classes they can be the head of endocentric projections, i.e. prepositional phrases (*the following day* vs. *on the following day*). Like verbs they can govern case and just like nouns they may form phrases that can be focused in cleft constructions. It is also a well-known fact, however, that in contrast to these three other categories, the class of prepositions is a very heterogeneous one and straddles the line between the lexical system and the grammatical system of expressive devices. In the course of the historical development of a language, prepositions may replace case markers (the dative is replaced by *to*, the genitive is replaced by *of*) and their meaning is often very general and abstract. In other words they may manifest properties more characteristic of grammatical elements than of lexical elements.

Both nouns (cf. German *zeit*, *kraft*, *zwecks*, *laut*, *trotz*, *falls*, *angesichts*, etc.) and verbs (cf. English *concerning*, *considering*, *during*, *notwithstanding*, *come*, *ago*, etc.) may provide the sources for their historical development. Prepositions and postpositions, which follow rather than precede their complement noun phrase, are subclasses of the more general category of “adpositions”. Postpositions are a marginal phenomenon in both English and German. *Notwithstanding* and *ago* are possible candidates in English and *zuliebe* is a potential candidate for such a sub-class in German.

It has often been pointed out that there is a close relationship between prepositions, conjunctions and conjunctional adverbs (conjuncts). Members of these three lexical classes are in complementary distribution, differing only in the constituents they combine with: NPs (or DPs) in the case of prepositions, subordinate clauses in the case of conjunctions and main clauses in the case of conjuncts. Given this complementarity, it should not come as a surprise that we find similar forms (English *because*, *because of*) or even the same form for a specific semantic
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type in all three cases. Such formal identity can be observed in the use of since, before and after in English (cf. [4]). There is not a single case of such complete identity in German.

(4) a. *He arrived well before noon.* (preposition)
   b. *He had left before I could talk to him.* (conjunction)
   c. *He had done this before.* (conjunct)

As far as their meaning is concerned, prepositions can be classified into several subgroups: (a) local prepositions, (b) temporal prepositions and (c) those expressing other adverbial relations (cause, condition, concession, purpose, etc.). Prepositions that are more or less exclusively used as case markers (English to, of; French de, à) typically derive from local prepositions. Temporal prepositions typically derive from the local use of the same expression, since time is generally conceptualized as space (cf. Haspelmath 1997). This phenomenon can be observed in both English and German, and in fact in a wide variety of languages:

(5) Engl.: at noon, on Monday, in the year 2010, before dawn, by the end of the month, around noon, over the weekend, many months ahead, etc.
   Germ.: um drei, am Montag, im Jahre 2010, vor Sonnenaufgang, über die Jahre, innerhalb einer Woche, auf ein paar Minuten, etc.

As is shown by these examples, the general conceptualization of time as location is identical in the two languages, whereas the individual (by now ‘dead’) metaphors are not. Purely grammatical uses of prepositions also typically derive from local meanings:

(6) Engl.: the language of description, the language under description, something is in motion, he is at work, Bill is on duty
   Germ.: Karl ist bei der Arbeit, er ist auf Arbeit/Montage, Karl ist am Lesen, er steht unter Beobachtung

The claim that these different uses of local prepositions in English and in German manifest different conceptualizations and therefore also different worldviews, as it is often made within the framework of Cognitive Linguistics, is a highly problematic one, since the relevant metaphors are ‘dead’ and cannot easily be revived. That these expressions may have been semantically motivated at some time of their historical development is a different matter.

3. Subclasses of temporal adverbials and temporal prepositions

Just like adverbials in general, temporal adverbials can also be divided into subclasses on the basis of semantic criteria. In contrast to the general classification of adverbials into categories like ‘local’, ‘temporal’, ‘causal’, ‘conditional’, ‘concessive’,

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2 This is an instance of a special construction in which the preposition auf is combined with noun phrases denoting a brief interval or an activity which requires only a minimal temporal investment (auf ein Stündchen, auf ein Wort, auf einen Sprung, auf ein Glas, etc.).
however, the criteria usable for the subclassification of temporal adverbials do not necessarily lead to disjoint classes, but may also provide cross-classifications.

The following semantic criteria and dimensions of meaning can be used for the subclassification of temporal adverbials (cf. Schopf 1984, 117ff., Schopf 1987). Those that are of specific interest to us are the ones that do not only apply to an adverbial (or a PP) as a whole, but also to the prepositions that are a constituent thereof.

(i) Deictic vs. non-deictic
   (e.g. two days ago, the other day, in two years time vs. before sundown)

(ii) Anaphoric vs. non-anaphoric
    (in the meantime vs. the first Monday of September)

(iii) Time-span vs. point-in-time
     (during the day, over the past few years vs. at noon)

(iv) Duration vs. frequency (for two hours vs. several times)

(v) Frame vs. event quantification
    (on three occasions he actually kissed her vs. he kissed her twice)

This list is by no means a complete one. There are many other criteria and dimensions that could be used. Moreover, there also seems to be a hierarchical relationship between certain dimensions. The anaphoric/non-anaphoric dimension is a further subdivision of the non-deictic class:

(7) time adverbials (point-in-time, time-span, etc.)
    deictic non-deictic
        anaphoric non-anaphoric

Anaphoric time adverbials, in turn, seem to be further classifiable in terms of anteriority (before), simultaneity (at the same time, meanwhile) and posteriority (afterwards). Durational adverbials may denote the beginning (from now on, since last year), the duration (for three hours, from Monday to Saturday) and the endpoint of a time period (until Friday). Or, to mention another well-known distinction, there is the opposition between duration (Zeitdauer) and temporal requirement (Zeitbedarf) that plays a role as a diagnostic for the differentiations of aktionarten. States and processes may combine with durational adverbials, whereas events combine with the second group (He worked/did it for hours – He wrote/did it in a week.). These dimensions of meaning, however, cut across the two dimensions of context-dependence given above, so that we get something like the picture represented in (7).

3 The German counterpart of the durational non-anaphoric lexical unit for in English is the adjective lang (drei Stunden lang). Note that the cognate form long in English is restricted to the context of cyclic time periods like ‘day’, ‘night’, ‘month’, ‘year’ and only occurs with a preceding quantifier all (all day/night long).
4. Some German-English contrasts

The deictic meaning of a time adverbial can be due to various components of such constituents: to an adverb (until now), to an adjective (next week, last year) or to a preposition (ago, since). In contrast to English, there are no deictic prepositions in German. Thus a number of distinctions in the meaning and use of temporal prepositions between the languages under comparison can be found along the deictic/non-deictic dimension. The best known of those differences is probably the lack of a differentiation in German equivalent to the distinction between ago and before in English. Both of these prepositions translate as vor into German. Ago is deictic and identifies the moment of utterance as the point from which one has to count backwards. Before, by contrast, takes a point given overtly in the context as a point of departure for the specification of anteriority:

\[(8)\]  
\[a.\] two years ago – vor zwei Jahren  
\[b.\] two hours before sundown – zwei Stunden vor Sonnenuntergang  
\[c.\] two years ago today – heute vor zwei Jahren

Note that constructions like (8c), which specify a more precise distance from the moment of utterance, are the exact mirror image of their translations into German. The distinction between a deictic and a non-deictic preposition of anteriority is a common phenomenon in Romance languages (It. due anni fa, Fr. il y a deux ans).

Another well-known case of a deictic preposition is since, in contrast to German seit, which identifies the beginning point of a time-span that goes up to and includes the moment of utterance.

\[(9)\]  
\[a.\] He has lived in this country since 2001.  
\[b.\] He had lived in United States since 1990 and now he was thrown out.

Note that the use of since in a past perfect context indicates that the situation is described from the perspective of the subject referent. In contrast to German seit, since is not licensed in a past tense context:

\[(10)\]  
\[a.\] Er wohnte seit langer Zeit/Ostern in Berlin.  
\[b.\] *He was staying in Berlin since Easter.

The preceding examples illustrate another difference between English since and its counterpart seit in German. Seit can specify a time span by either identifying the beginning point of an interval or the interval itself, whereas only the former possibility is open for since.

A somewhat more marginal case of a deictic preposition is the deverbal preposition come, which can only refer to a time interval after the moment of utterance. Here again we find sensitivity to deictic properties not observable in German:

\[(11)\]  
\[a.\] Come Monday it will be all right.  
\[b.\] I am seventeen come Sunday.
In German the prepositions used in non-future contexts (*an, in, um*) have no deictic components and are also used in futurate contexts.\(^4\)

In some cases deictic restrictions are not relevant for a lexeme, i.e. not for a preposition in all its readings, but only for some of them (i.e. for a lexical unit). *In* is such a preposition and the reading at issue is the one found in examples like *in time*, as in the famous line from John Cleese “*He will be an invaluable member of our faculty and in time a valuable one*”. This preposition has a number of temporal uses. Analogously to *ago*, it may identify a point-in-time by specifying its distance from the moment of utterance, but in contrast to *ago* the point is located in the temporal domain after the moment of utterance.

\[
\text{(12)} \quad \text{In two years time we will be in Beijing.}
\]

So far there is no contrast to German. The preposition *in* may, however, also combine with the bare noun *time* and then have a translation like *mit der Zeit* or *allmählich* in German:

\[
\text{(13)} \quad \text{He will be a useful member of our faculty and in time a very valuable one.}
\]

The reading at issue is no 21 in the *Longman Dictionary of Contemporary English*, where it is glossed as ‘after a certain period of time, especially after a gradual process of change and development’. In contrast to the related expression *mit der Zeit* in German, *in time* is excluded from past time contexts, as is shown by the following translational problem:

\[
\text{(14)} \quad \begin{align*}
\text{a.} & \quad \text{Mit der Zeit erhärtete sich der Verdacht.} \\
\text{b.} & \quad \text{In the course of time/as time went on/\textcolor{red}{as time went by/\textcolor{red}{in time the suspicion was confirmed.}}}
\end{align*}
\]

5. **German *bis* and its counterparts in English**

There are both local and temporal uses of German *bis*. The former use, exemplified by (15), will not concern us here:

\[
\text{(15)} \quad \begin{align*}
\text{a.} & \quad \text{Ich begleite dich bis zum Bahnhof.} \\
\text{b.} & \quad \text{I will accompany you as far as the station.}
\end{align*}
\]

Nor will we consider combinations of prepositions like *bis zu* or *bis auf*. The focus of the following remarks will be exclusively on the contrast between *until* and *by* pointed out above.

\[
\text{(16)} \quad \begin{align*}
\text{a.} & \quad \text{You can have my bike till Sunday.} \\
\text{b.} & \quad \text{Du kannst mein Rad bis Sonntag haben.}
\end{align*}
\]

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\(^4\) In Swedish there is a general deictic distinction between prepositions denoting time intervals: *i* is used for intervals before the moment of utterance and *på* for intervals after that point of orientation:

\[
\begin{align*}
\text{(i)} \quad & \text{Vad gjorde du i söndags? ‘What did you do on Sunday?’} \\
\text{(ii)} \quad & \text{Vad ska du göra på söndag? ‘What will you do on Sunday?’}
\end{align*}
\]
(17)  a. Let me have it back by Monday.
    b. Bis Montag musst du mir es wieder zurückgeben.

Before we provide an analysis of the opposition in English and identify the criteria for the correct choice of translational equivalents in German, we would like to briefly broaden out our comparative perspective. A quick cross-linguistic search carried out by us has shown that both the situation found in English and that found in German are frequently found elsewhere. Among the languages which can use the same expressions in both contexts we also find Bosnian-Croatian-Serbian (do), Mandarin (daò) and (modern as well as biblical) Hebrew ad (cf. König 1974, Mittwoch 2001). This cross-linguistic observation shows that the two uses of German bis and those of their counterparts in the other languages must share certain semantic properties. The double use of the relevant forms cannot be a coincidence. On the other hand, there are languages that differentiate between two forms, just as English does. Norwegian (innen – inntil) Swedish (innan – tills) and Finnish (mennessä – asti, saakka). In each case the counterpart of by is mentioned first.

(18) Näyttely on avoinna ensi kesään saakka/asti.6
    ‘The exhibition will be open until next summer.’

(19) Ensi perjantaihin mennessä asia on ratkaistu.
    ‘By next Friday the matter will have been dealt with.’

These observations show that there must be a clear semantic difference between the two uses of German bis and those of their counterparts, as well as between by and until in English. What we are therefore looking for is a semantic analysis that explicates both the shared features and the differences.

There is one obvious contrast between these two examples: until identifies a time span by specifying its end-point, whereas by identifies a point-in-time and can roughly be paraphrased by ‘at the time given/at the very latest/before or at’. Whereas until specifies the endpoint of a continuous interval during which some state of affairs is the case, by specifies the latest possible point at which something must be the case, i.e. has started. As a consequence of this distinction the two prepositions differ in their combinatorial properties. By cannot easily combine with durative verbs like endure, keep on, last, remain, stay (cf. [20a]) and is generally incompatible with sentences which exclude punctual adverbials. Until, by contrast,

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5 There are, of course, also languages where the relevant distinction cannot be clearly expressed by a lexical opposition. In French jusqu’à corresponds to until, but there is no simple lexical counterpart for by. A sentence like (2) would thus be translated into French as follows:

(i) Envoyez-moi vos résumés avant le 1 mai / (le 1 mai au plus tard).

6 It is probably of interest to note in this context that Finnish asti and saakka may translate both until and since. There is, however, never a problem of ambiguity since Finnish uses different case markings to differentiate between a reference to ‘all time points up to t₁,’ (illative) and ‘all time points from t₁ on’ (elative).
cannot occur in sentences with transitional event verbs like *stop, cease, arrive, leave, die, win*, etc. (cf. [20b]). Moreover, this preposition is generally incompatible with sentences in the Progressive (cf. [20c]).

(20) a. *By 9 o’clock John stayed in the library.*  
    b. *John arrived until 9 o’clock.*  
    c. *Mary was dancing until the music stopped.*

In other contexts both *by* and *until* are acceptable so that we get minimal pairs like the following:

(21) a. *The restaurant will be open by eleven.*  
    b. *The restaurant will be open until eleven.*

In our specific case there is a clear semantic contrast, i.e. the contrast between opening time (21a) and closing time (21b). Note, however, that there are other contexts where the contrast between the two temporal prepositions is not similarly dramatic. The first of the following sentences specifies a stretch of time during which difficult problems were dealt with. In providing the endpoint of that stretch it also introduces a contrast with what will follow, as indicated by the continuation. The sentence with *by now* specifies the endpoint of a development and thus the beginning of a new state.

(22) a. *Until now we have dealt with the most difficult problems.*  
    b. *From now on we can be more relaxed.*

(23) *By now you will have understood the most difficult problems.*

A further interesting observation on the semantic contrast between the two temporal prepositions is that sentences with one can be paraphrased by sentences employing the other. The relevant paraphrases crucially involve negation. As is shown by the following examples, a sentence with an external negation (i.e. a sentence where the temporal preposition is within the scope of the negation) is equivalent to a sentence with the other preposition where only the predicate is negated:

(24) a. *The restaurant will NOT be open by eleven.*  
    b. *The restaurant will be not-open (= closed) until eleven.*

(25) a. *The restaurant will NOT be open until eleven.*  
    b. *The restaurant will be not-open (= closed) by eleven.*

This equivalence between the external and internal negation of two sentences which differ only in one expression (a preposition in our case) is reminiscent of the equivalence between the relevant negations of sentences with universal and existential quantifiers, mentioned in any introduction to formal logic:

(26) a. $\neg (\forall x) f(x) \equiv (\exists x) \neg f(x)$  
    b. $(\forall x) \neg f(x) \equiv \neg (\exists x) f(x)$

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7 The capitalization of *not* is meant to indicate stress.
The following English sentences illustrate this equivalence between two ways of negating the quantifiers of predicate logic:

\[(27)\]

a. Not everybody speaks English. \(\equiv\) Some people do not speak English.

b. Nobody likes snakes. \(\equiv\) There is not anybody who likes snakes.

The equivalence between our sentences with \textit{by} and \textit{until} can therefore be regarded as a special case of this general phenomenon of "duality" and the meaning of sentence pairs like (21a/b) can roughly be analysed as follows:\footnote{There are many cases of such dual pairs in languages. Pertinent examples in English are \textit{may/can} – \textit{must}; \textit{already} – \textit{still}; \textit{because} – \textit{although}, etc. Note also that Dutch draws a distinction between a universal (\textit{gedurende}) and an existential counterpart (\textit{tijdens}).}

\[(28)\]

a. future \(\left[ (\forall t) t' \leq t \leq 11 \ \text{At(be-open (restaurant), t)} \right] \)

\(\) (i.e. The restaurant will be open at all times from a contextually given point \(t'\) up to and including eleven.)

b. future \(\left[ (\exists t) t' \leq t \leq 11 \ \text{At(be-open (restaurant), t)} \right] \)

\(\) (i.e. There is a point-in-time \(t\) whose value ranges between a contextually given time \(t'\) and eleven such that the restaurant will be open at that point.)

This analysis explicates our intuition that the meanings of \textit{by} and \textit{until} must be very similar – as is reflected in the fact that some languages do not distinguish two forms – and that they are also different, since there is a lexical distinction in many other languages.

There are some other, minor differences connected with the lexical contrast we have just discussed. In those cases where German \textit{bis} combines with \textit{jetzt}, i.e. when the time span indicated by a preposition goes up to the moment of utterance, there are a few other translational options in English:

\[(29)\]  
To this hour/so far/up to/until now no major spokesman has publicly reprimanded Olmert.\footnote{The time adverbials in (29) are very similar, though not completely identical in meaning. \textit{Until now}, for example implies a change at the moment of speech that is not implied by \textit{up to now} or \textit{so far}.}

A far more interesting contrast, however, shows up in connection with English \textit{by}. As was pointed out above in our analysis of examples like (20), \textit{by} in combination with the appropriate predicates may denote a development that has reached a certain state at the point-in-time given.

\[(30)\]

a. By that time I was feeling absolutely exhausted.

\(\) ‘Inzwischen fühlte ich mich völlig erschöpft.’

b. If you don’t know me by now, you will never know me.

\(\) ‘Wenn Du mich jetzt noch nicht kennen gelernt hast …’

c. It was dark by the time we reached Paris.
Such examples, which do not always permit the translation *bis* in German and are sometimes more appropriately translated by *inzwischen*, by *schon* or by *noch*, reveal a subtle difference between temporal *by* and its normal German counterpart *bis*. The implication of a gradual development cannot be expressed by *bis*.

6. Negation of duration

There is nothing remarkable about the fact that sentences with adverbials of duration can be negated. This is possible in both English and German, as is shown by the following parallel examples in the two languages:

(31) a. *John did not stay until the very end.*
    b. *John ist nicht bis zum Ende geblieben.*

(32) a. *I did not talk for two hours.*
    b. *Ich habe nicht zwei Stunden lang geredet.*
    c. *O.k., I won't touch anything until the police are here.*

It is a well-known fact that there are at least two uses of negations: denials and the assertion of a situation in terms of a negative statement. The examples in (32) are denials of a claim to the contrary and here the two languages are completely parallel. The selectional restrictions between time adverbial and predicate are exactly the same as in the corresponding affirmative sentences: predicates denoting states or processes are licensed and event-denoting predicates are excluded. There is, however, a second use of such sentences in English, which has no parallel in German. In these cases *until* does combine with punctual and event-denoting predicates and together with the preceding negation the preposition translates as the focus particle *erst* into German:

(33) a. *John does not start working until 9 o’clock.*
    b. *John beginnt erst um 9 mit der Arbeit.*

(34) a. *John did not arrive until Monday.*
    b. *John kam erst am Montag an.*

The basic difference between constructions of type (31) above and those of type (33)/(34) is that the latter do not only imply the non-occurrence of the relevant activity, state or event up to the point given, but also an instantiation of the relevant event at the point-in-time given, i.e. a change from negative to positive. Thus (33a) implies that John starts work at nine o’clock and (34a) implies that John arrived on Monday. The opposition generally found in English between two ways of specifying duration, i.e. by specifying a time-span (*for*) and specifying the end point of an interval (*until*) is also found in sentences of type (33), as is shown by the following examples. Again the combination of negation and preposition translates as *erst* into German:
(35)  a. The movie won’t start for another hour.
     b. Der Film beginnt erst in einer Stunde.

(36)  a. He won’t be here for another week.
     b. Er kommt erst in einer Woche.

Looking at such sentences from the perspective of German, we can say that erst translates as not...until if it precedes an expression denoting a point in time and as not...for if it precedes an expression denoting a time-span.

There is a rich and controversial literature on the relationship between constructions of type (31)/(32) and those of type (33)-(35), which involves such questions as the possibility of analysing the latter compositionally, whether we have to assume one or two meanings of until, what the scope of negation is, how these two constructions are disambiguated, etc. (Karttunen 1974; Mittwoch 1977, 2001; König 1991; Declerck 1995; Swart 1996). I will refrain from giving a detailed summary of this discussion and only mention a few important points.

The most basic difference between the examples in (31)/(32) and those in (33)-(36) is a difference in the relative scope of negation and time adverbial. That two scope-bearing elements may differ in their relative scope is a wide-spread and well-known phenomenon. In our particular case of (31a) negation takes wide scope over the rest of the sentence and is thus interpreted as a denial of the rest of the sentence. Its basic semantic structure can thus be represented as follows:

(37)  \[ \sim [\text{until the very end } [\text{John stayed at the party}]] \]

The sentences in (33)-(36), by contrast, can only be interpreted if we assume a reversal in the order of the two operators (cf. Mittwoch 2001):

(38)  Until nine o’clock \[ \sim [\text{John starts work}] \]

The interpretation of (31)a. on the basis of (37) is unproblematic. These sentences are simply denials of the corresponding affirmative sentences. The problem is to get the positive interpretation of (33)b. (i.e. ‘John starts work at nine’) from the narrow-scope negation and the durational adverbial as indicated in (38b). The most plausible analyses given in the literature are based on the assumption that the temporal delimitation of a negated situation will typically imply that the positive situation occurred after the end of the interval:

(39)  until t \[ \sim [p] \] \[ \rightarrow p \text{ at/after } t \]

This implication probably started out as a Gricean (conversational) implicature and became a conventional one of frequent use. The whole process probably started out in ambiguous cases like the following:

(40)  \text{John won’t be here until seven.}

This sentence can be interpreted both as a denial of the corresponding positive assertion and as an assertion that John will turn up at seven but not before. In many cases the positive implication can still be cancelled. Our sentence could be continued as follows:
(41) *And I am not even sure that he will turn up later.*

This shows that we may still be dealing with a conversational implicature. On the other hand, there are many contexts that seem to indicate that the positive implication – which then requires a translation of *not ... until* by *erst* – cannot be denied. These are typically contexts which indicate that a speaker has the requisite knowledge to make a positive assertion for a time after the relevant interval:

(42) *I had no idea until two days ago.*

Furthermore this change in the status of the positive implication is also clearly revealed in specific syntactic contexts, such as clefting or fronting, which exclude the weaker interpretation:

(43) a. *Not until he wanted to pay did he realize that his money was gone.*
   b. *It was not until he wanted to pay that he realized that his money was gone.*
   c. *That night she was strained, but she had a good night and it was not for several days that she broke down again.*

The correct translation of *not...until* thus depends on the scope of negation and the status of the positive implication. With a wide-scope negation the translation is completely parallel: *nicht ... bis*. With narrow scope negation, the translation depends on the status of the positive implication. If it is purely a matter of implicature we also have to opt for the literal translation. Moreover, even in a case like (44), where the positive implication is presented like an afterthought, a literal translation is possible:

(44) *Ich hatte keine Ahnung, bis vor zwei Tagen.*

In those constructions were the positive implicature is really a conventional one *erst* is the correct translation. Note that the development of durational sentences with a narrow-scope negation to positive sentences is observable in English with both types of durational adverbials, i.e. those that indicate the final boundary of an interval (*until t*) and those that measure the duration (*for a certain interval*). Both sentence types require translations with *erst* into German, as is shown by (33)/(34) and (35)/(36). In other words, the gap created in English by the absence of a differentiation between two exclusive focus particles like *nur* and *erst* in German is filled by reanalysing combinations of negation and prepositions as focus particles.

7. Concluding remarks

Our short confrontation of temporal adverbials in English and German has shown that the two subsystems are largely organized in a parallel fashion. There are, however, some contrasts in the deictic and non-deictic meaning of prepositions as well as in the different encoding of closely related semantic distinctions. It was shown, moreover, that the meanings of temporal prepositions in the two languages
under comparison differ only along very specific dimensions (deixis, specification of intervals, type of quantification, etc.). A lack of a differentiation parallel to the one between by and until in English creates learning problems for speakers of many other languages. In summarizing some earlier work (König 1974), I hope to have also shown that the two temporal prepositions by and until express different, though related, meanings. These two prepositions form a dual pair and each can thus be paraphrased with the help of the other and a negation with the appropriate scope.

Works cited