

The temporal trait of German incremental *noch*

Carla Umbach, University of Cologne, July 2024

The primary use of German *noch* is its use as a temporal adverb indicating continuity, as in (1). According to the standard analysis *noch* induces a presupposition – it was raining in a preceding adjacent period of time – and induces an implicature such that it might or will stop raining soon.

- (1) Es regnet noch.
'It is still raining.'

The so-called marginality use of *noch*, as in (2), is close to the temporal use in indicating continuity, though the scale is one of increasing distances instead of progression in time. In (2) *noch* induces the presupposition that there are places adjacent to Osnabrück but closer to the center of Lower Saxony, and the implicature that on this trajectory the Lower Saxony border will soon be reached.

- (2) Osnabrück liegt noch in Niedersachsen.
'Osnabrück is still in Lower Saxony.'

Another prominent use of *noch* is in comparative constructions, see (4), where it is translated into English by *even*. Comparative *noch*-sentences presuppose a preceding comparison in which the standard of the *noch* sentence (Adam) takes the role of the object of comparison. The standard of the presupposed comparison may be given by some other entity or by a prototype representing the cut-off for the positive (*Adam is taller than Elsi / Adam is tall*, i.e. taller than POS). It is argued in Umbach (2009) that the comparative reading is related to the marginality reading, the scale being given by increasing distances.

- (3) Berta ist noch größer als Adam.
'Berta is even taller than Adam.'

The focus of the current paper will be on the incremental use of *noch*, as shown in (4). In this use, *noch* is close though not equivalent to *auch* 'also/too', which is why it is frequently called *additive*. Substituting *noch* by *auch* in (4a) seems to make no difference. In (4b), however, it yields a different interpretation in requiring another beer drinking person. It is argued in Umbach (2012) that additive *noch* differs from *auch* in imposing an order on alternatives: While with *auch* alternatives are given as an (unordered) set, in the case of *noch* they form a list indexed by discourse time. This allows for a schnaps in addition to a beer but also for a second beer in addition to the first one.

- (4) (Otto hat ein Bier getrunken. 'Otto had a beer.')
- a. Später hat er noch einen Schnaps getrunken.
'Then he had a schnaps in addition.'
 - b. Später hat er NOCH ein Bier getrunken.
'Then he had another beer.'

The challenge in the analysis of *noch* has always been the question of how its various uses are connected. On the one hand, there is some kind of a continuation – progression in time or increase of distance – while on the other hand, there is some kind of addition of discrete items. In this paper we will consider two cases of the use of *noch* which have up to now not been looked at from the point of view of additivity/incrementality. First, *noch* can be combined with *mehr* 'more', see (5)-(6). Secondly, there are *noch* sentences which have a temporal flavor though there is no apparent continuity and at the same time have an additive/incremental flavor though the nature of the added item is unclear, see (7).

In (5) - (6), *mehr* is used in isolation and also in combination with *noch*. (5a) is preferably understood as indicating an increase in strength of the rain as compared to before, while (5b) is ambiguous between strength and duration. Likewise, (6a) is restricted to a comparative reading – today's earnings were 50 EU – while (6b) allows for both a comparative and an incremental reading. This is

different with English *more* which has both readings even when in isolation, see Greenberg (2010).¹

(5) (Es hatte nicht aufgehört zu regnen, im Gegenteil:
'It hadn't stopped raining, on the contrary:')

- a. Es regnete mehr.
'It is raining harder.'
- b. Es regnete noch mehr.
'It is raining harder / still raining.'

(6) (Gestern haben wir dreißig EU eingenommen.
'We earned thirty EU yesterday.')

- a. Heute waren es zwanzig EU mehr.
- b. Heute waren es noch zwanzig EU mehr.
'Today there were twenty more_{comp} / more_{inc} EU.'

The second issue addressed in this paper are *noch* sentences like the one in (7) which seem to resist the standard temporal/continuous interpretation and instead give the impression of an additional event, thereby raising the question of what the role of *noch* in these sentences is. Klein (2018) calls this use *further-to noch* (see also Beck 2016).

(7) (Er packte den Koffer und goss die Blumen. 'He packed his suitcase and watered the flowers.')

- a. Dann duschte er noch (bevor er die Wohnung verließ).
'Then he took NOCH a shower (before leaving the apartment).'
- b. Dann flog er (*noch) nach New York.
'Then he flew (NOCH) to New York.'
- c. Dann duschte er noch. # Dann machte er das Bett (bevor er die Wohnung verließ).
'Then he took NOCH a shower. #Then he made the bed (before he left the apartment).'

Comparing (7a) to (1), there is at first sight no activity continued in the *noch* sentence. His showering is a separate event, distinct from his bag packing and watering the flowers. On the other hand, his showering is one in a list of activities that might be subsumed by a question under discussion (QuD) like "things to be done before leaving the house ". Activity that doesn't match with the QuD like 'fly to New York' are blocked, (7b). Note that this constraint is due to the use of *noch* – (7b) is perfect without *noch*. Moreover, the sequence in (7c) is not acceptable, which is evidence that his showering must be the final element of the *things-to-be-done-before-leaving-the-house* list.

The observation that *further-to noch* sentences have to be final elements in a list of adjacent activities which is subsumed by a suitable QuD suggests an interpretation along the following lines: The *noch* sentence describes an event which is the top element of a list of temporally adjacent events. The events in this list add up to a "more developed" superevent, see Greenberg (2012) (where the nature of "more developed" is a matter of debate). According to this interpretation, *further-to noch* is like temporal *noch*, with a presupposition that there is a temporally adjacent antecedent (his bag packing plus watering

¹ In addition the *mehr* there is German *weiter* 'further' which is the comparative form of the dimensional adverb *weit* 'far / wide'. It does not allow for a comparative reading but only for an incremental one such that the rain continues or the earnings are added up. Combination with *noch* seems not to make a difference.

- a. (Es hatte nicht aufgehört zu regnen) 'It didn't stop raining'
Es regnete (noch) weiter. 'It is still raining.'
- b. (Gestern haben wir dreißig EU eingenommen.) 'Yesterday, we earned 30 EU.'
Heute waren es (noch) weitere zwanzig EU. 'Today, there were twenty more_{inc}.'

the flowers) and an implicature that the *noch*-sentence marks an end (take a shower is the last activity before leaving the house).

This interpretation of *further-to noch* sentences explains the intuition that an ongoing activity (*doing things to be done before leaving the house*) is continued and at the same time something is added (*take a shower*). Moreover, an analogous analysis of cases of additive *noch* as in (4) is suggested, that is, drinks are added via summing up drinking eventualities, which is what Greenberg (2010) claims for English incremental *more*. It has to be noted though that German *mehr* has to be combined with *noch* to yield an incremental interpretation, (5)/(6).

To conclude, in this paper the hypothesis will be defended that German *noch* in all of its uses induces the presupposition that there is an antecedent to be continued and induces the implicature that the event in the *noch*-sentence marks a final segment. Continuation may be real-time or discourse-time (the relevance of discourse-time continuation in the interpretation of *noch* is shown in, e.g., Eckard 2006 and Umbach 2012). In (1), raining real-time continues the previous raining event. Likewise, taking a shower in (7a) real-time continues the bag-packing plus watering event. Drinking a schnaps in (4a), on the other hand, discourse-time continues the beer drinking event.

Incrementality, however, is not due to discourse-time alignment (contra Umbach 2012) and instead results from distinctiveness: The raining event in (1) overlaps with the previous raining, but the taking a shower event in (7a) is distinct from the bag-packing plus watering the flowers event, and the drinking a schnaps event is distinct from the drinking a beer event. So while continuation – be it real-time or discourse-time – is common to all uses of *noch*, incrementality results from combining continuation with distinctiveness.

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