## The shared core of memory predicates is non-novel knowledge

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In a nutshell: I claim that what memory predicates like English 'remember', German 'noch wissen' ('still know') and 'sich erinnern' (REFL remember/remind) have in common is that they denote a form of non-novel (not necessarily retained, contra [11]) knowledge ('still know or know again'), and that this is oftentimes reflected in morphemes of retention, restitution, and repetition (*still, back, again, re-*). Cross-predicate variation can be attributed to the 'still vs. again' distinction and to additional requirements on causation and habituality. I tie the occurrence of reflexive pronouns in memory predicates (here: in 'sich erinnern') to a causation event, which explains why some memory predicates have eventive readings ('remembering right now').

**Puzzle:** The idea that all remembering is a form of knowledge has been proposed in philosophy [3] as well as in linguistics [11]. It makes sense of the German memory predicate 'noch wissen' ('still know') which means the same as German 'sich erinnern' (REFL remember/remind) and English 'remember' in most contexts [10]. [11] decompose 'noch wissen, wie p' (typically requiring personal experience of an event, [10]) as retained ('noch') knowledge ('wissen') of an informationally rich 'wie' ('how')-proposition. They weakly suggest an extension of their semantics to a cross-linguistic core of memory predicates. However, the idea that *all* remembering is retained knowledge faces the challenge that it cannot capture eventive 'is remembering right now' uses that some memory predicates have in addition (fn. 4 in [11]). Only German 'sich erinnern' ('REFL remember/remind'), like English 'remember', but not 'noch wissen' has eventive uses, (1), and knowledge (i.e. having evidence for p available, [11], (2)) is a state an agent can be in, not an event. The aim of this submitted talk is to solve this problem.

- (1) a. *Edo ist dabei, sich zu erinnern.* \*Edo ist dabei, noch zu wissen. 'Edo is about to remember / in the course of remembering.'
  - b. Al [versucht/schafft], sich zu erinnern. ??Al [versucht/schafft], noch zu wissen. 'Al tries/manages to remember.'

General semantic proposal: I propose that the shared core of memory predicates [henceforth: remember'] is non-novel (not necessarily retained) knowledge. This means giving up the idea that 'remembering (how)' is an attitude towards the past (contra [12] a.o.) – and instead locating its temporal requirements at a higher level, applying to the attitude itself. (This means that nothing in the resulting truth conditions prevents remembering of the future – 'I remember (from my vision) how I am going to be killed by Zeus age 75' – per se.) I add a standard entry for 'wieder' – in (4) – (that allows for repetitive or restitutive readings, depending on its syntactic position, [5, 4]) to evidential 'wissen' (2) and 'noch' (3) from [11], yielding 'wieder wissen' in addition to 'noch wissen'. I identify English 'remember' with 'wieder wissen' and remember' with 'noch wissen or wieder wissen' (still knowing, knowing again or 're-knowing'), (5).

- [2] [wissen]  $^{@,c} = \lambda p : \underline{p_{@}} . \lambda x. (CONS_{@,c} \cap EVI_{x,@}) \subseteq p$  (=[11]'s (11), 'know') presupposed: p=1 in  $^{@}$  asserted: All worlds that are both compatible with x's evidence (EVI) and to be considered by contextual standards (CONS) are p-worlds. henceforth simply: evi(x,p)
- [noch] =  $\lambda q$ :  $(\exists t)[(t \prec ! t_{@}) \land q_{\langle w_{@}, t \rangle}] \cdot q_{\langle w_{@}, t_{@} \rangle}$  (=[11]'s (15), modified, 'still') presupposed: q was true at a time directly preceding ( $\prec$ !) the utterance time ( $t_{@}$ ) asserted: q=1 in @ currently
- (4) [wieder] =  $\lambda q$ :  $(\exists t)[((t \prec t_@) \land (t \not\prec ! t_@)) \land q_{\langle w_@, t \rangle}]. q_{\langle w_@, t_@ \rangle}$  ('again') presupposed: q was true at a time preceding, but not directly preceding,  $t_@$  asserted: q=1 in @ currently
- (5) [remember']  $^{@,c}$  = [noch wissen or wieder wissen]  $^{@,c}$  =  $\lambda p : \underline{p_{@}}.\lambda x : (\exists t)[(t \prec t_{@}) \land evi(x,p)_{\langle w_{@},t \rangle}]. evi(x,p)_{\langle w_{@},t_{@} \rangle}$  presupposed: p=1 in @; at some time (directly or not) preceding  $t_{@}$ , evi(x,p).

asserted: evi(x, p)=1 in @ currently

The range of concrete realizations of *remember*' is either of the disjuncts by itself or the weaker, underspecified case. The huge overlap in situations that satisfy these three different sets of truth-conditions relative to *some* time interval explains why these cases are (perceived as) one class of memory predicates pragmatically. In addition to the core *remember*', actual memory predicates can either maintain a stative character (like 'noch wissen', (1)) or include operators effecting causation or achievement of this state, leading to eventive readings. Habituality or dispositionality of the achievement/causation event may result in stativity again.

**Application to reflexive memory predicates**: I argue that there is a natural link between the above general account for *remember*' and the appearance of reflexive pronouns in (at least, pending typological investigation) some Germanic and Romance memory predicates: (Habitually) causing *oneself* to know something is a case of *remember*' in the above sense, because it requires previous knowledge. Applying this idea to German 'sich erinnern' (REFL remember/remind), I understand the apparent reflexive morpheme as a proper direct argument [1, 8] and 'er-' as a prefix of achievement/ability for a stem 'innern' which I identify with 'cause-to know'. Consequently, the non-grammaticalized meaning of 'sich erinnern' can be paraphrased roughly as '(managing to) cause oneself to know'. This broad meaning is still in use, (6-a). I claim that the use as 'remember' is a version of this where agent and direct object co-refer to the same *time-slice of* a person ( $x^{t_i}$  in the trees below), such that the reminding and the being reminded co-occur in time.<sup>2</sup> That grammaticalization of this second reading is not completed is backed up by failed ambiguity tests, (6).

(smallcaps=focus)

- (6) a. *Mo erinnert sich mit einem* POST-*it an Kos Geburtstag* 'Mo reminds themself with a post-it of Ko's birthday'
  - b. ... aber JO (erinnert sich) einfach SO (daran).
    - '... but Jo remembers it just like that.'

While *having* evidence (available) ('(noch) wissen', (1), Fig. 1a) is a state, reminding oneself of having it is an event (Fig. 1b). This directly explains the eventive uses of 'sich erinnern' in (1) qua [cause] in Fig. 1b which can be morphologically tied to 'er-' and/or the transitivity obtained by treating 'sich' as a proper argument in the concrete German case. The stative uses of 'sich erinnern' in (1) are obtained easily by applying an (independently motivated, [13]) operator of dispositionality (DISP) or habituality (see Fig, 1c). Unlike a direct generalization of [11], I make sense of the common 'sich noch erinnern' ('REFL still remember') as roughly 'still having the disposition to remind oneself', instead of having to analyze it as [noch[noch[wissen]]].

Finally, the complex memory predicate 'sich erinnern können' ('being able to remember') is grammatical, but does not add anything to the stative reading of 'sich erinnern', because 'können' just takes the place of [DISP] in the composition (compare Fig. 2a and 1c). 'noch wissen' ('still know'), on the other hand, unambiguously denotes a state and therefore does not allow for the ability flavor of root modal 'können' ('can'/'be able to'), (7-a), which scopes below tense (as opposed to epistemic 'can'/'be possible' [2], Fig. 2c) and lacks a local event to associate with in the case of 'noch wissen', cf. (7-b).

- (7) a. x kann sich erinnern  $\sqrt{\text{root modal }}(\sqrt{\text{)}} \text{ epistemic modal }$  x kann noch wissen  $\times$  root modal  $\sqrt{\text{epistemic modal}}$   $\times$  root modal  $\sqrt{\text{epistemic modal}}$  is able to remember?' 'possible that x remembers'
  - b. Amy [muss/will] sich erinnern. 
    ✓ root modal ✓ epistemic modal 
    ✓ amy [muss/will] noch wissen. 

    'Amy has to / wants to remember.'

**Outlook**: Philosophically speaking, my account raises the question what the search for shared cross-linguistic cores of attitudes is to begin with: 'sich erinnern' is an instance of *remember*' according to

<sup>&</sup>lt;sup>1</sup>This is diachronically supported by the Middle High German verb 'innern' – 'letting someone know' / 'making inner' [6, 7]; and synchronically by the use of non-reflexive 'erinnern' as reminding someone (else).

<sup>&</sup>lt;sup>2</sup>Both usages are memory predicates in the sense of (5) pragmatically, because reminding oneself demands previous knowledge – the agent already 'knows in the back of their mind' or they knew at some point.

its truth-conditional effect without *remember*' occurring in its internal composition. The multiple morphological ways in which [[remember']] comes about may involve various operators on knowledge, turning it eventive and then stative again.

On the syntactic side, an application of the restitutive vs. repetitive effect of 'again' (4) in relation to its position [4, 5] is called for: English 're-member' and German 'wieder-erinnern' ('again-remember') should be analyzed as 're-knowing' (Fig. 3a) and 're-remembering' [9], respectively – in a restitutive sense due to *again* attaching low, with only the result state in its scope. German 'wieder erinnern', in contrast, also allows for the repetitive sense of 'again' applied higher, to the causing event of the eventive reading of 'sich erinnern' (i.e. 'yet another event of recalling', Fig. 3b).

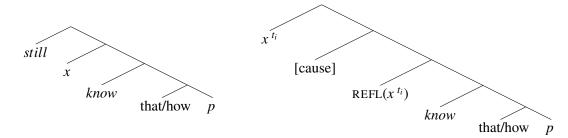


Figure 1a: 'noch wissen'

Figure 1b: 'sich erinnern', eventive.

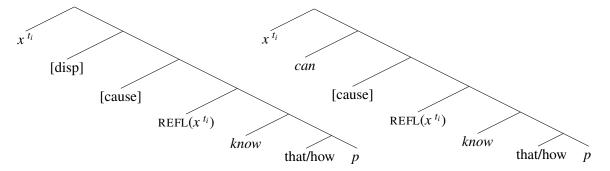


Figure 1c: 'sich erinnern', stative

Figure 2a: 'kann sich erinnern', root.

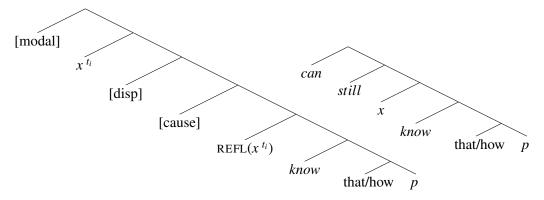


Figure 2b: 'MODAL+ sich erinnern', epistemic.

Figure 2c: 'kann noch wissen', epistemic.

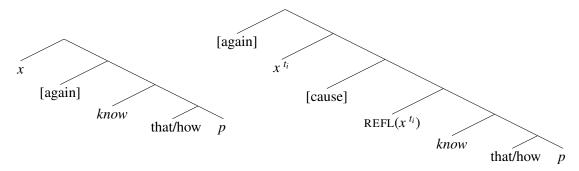


Figure 3a: knowing again, restitutive.

Figure 3b: re-causing knowledge, repetitive.

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