When 'still' becomes modal
Aspectual sources of concessive meanings

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Motivation

- English *still* and German *noch* are often treated as synonymous. (1) and (2) are translations of each other:

  (1) He is still at home.

  (2) *Er ist noch daheim.*
       he is NOCH home

- But *still* can express some things *noch* cannot express and vice versa.

- Our goal in this talk is to get a better understanding of the meaning and history of 'still'.

- We add a crosslinguistic perspective from Hebrew to the rich literature on 'still' (König & Traugott 1982; Hirtle 1977; Michaelis 1993; Ippolito 2007; Beck 2016, 2019).

Overview

- Two natural classes of *still*-type and *noch*-type adverbs: independent evidence from Hebrew *ʕadain* and *ʕod*

- Only *still*/*ʕadain* ('stretch continuatives') can become concessive

- Analysis of the *still*/*ʕadain* class

- Diachronic progression within the *still*/*ʕadain* class

- Open issues

English *still*: aspectual and concessive

(3) She is **still**$_{aspectual}$ living with her parents.

(4) She **still**$_{concessive}$ traveled to Sardinia.

(5) **Still**$_{d-concessive}$, she is living with her parents/she traveled to Sardinia.

- *Still* has an aspectual reading with imperfective predicates: (3)

- With eventive predicates *still* has a concessive reading: (4)

- Regardless of predicate, when stressed and sentence intial, *still* can have a discourse concessive reading: (5)

An informal characterization of uses

- Aspectual: state is ongoing
- Concessive (adversative): event takes place (and maybe state holds) despite possible interference
- Discourse concessive: speech act is made despite what was said/implied previously

There are additional uses we will set aside (*marginal spatial, marginal degree* and others; König 1977; Michaelis 1993; Ippolito 2007; Beck 2016, 2019).

Noch is only partly like *still*

(6)   a.   *Sie wohnt* **noch** *bei ihren Eltern.*
           She lives   NOCH   by her   parents
           'She is still*aspectual* living with her parents.'

   b.   *Sie fuhr* ***noch** *nach Sardinien.*
        she went   NOCH   to   Sardinia
        Intended: 'She still*concessive* traveled to Sardinia.'

   c.   ***Noch**, *sie fuhr   nach Sardinien.*
        NOCH   she travelled to   Sardinia
        Intended: 'Still*d−concessive*, she traveled to Sardinia.'

Some things only *noch* can express

- (6b) is fine if not concessive: it can have a reading where it means 'also'.

  Sie fuhr **noch** *nach Sardinien.*
  she went NOCH to   Sardinia

  'Then she also went to Sardinia.'

- *Noch* has additional readings, characterized as additive (Umbach 2009; Greenberg 2012; Thomas 2018).

Additive *noch*

(7)   a.   *Sie bestellte* **noch** *ein Bier.*
she ordered NOCH a   bier
'She ordered another beer.'

b.   *Er ist* **noch** (*schnell*) *einkaufen gegangen.*
he is NOCH (quickly) shopping gone
'He then also went shopping.'

c.   *Brauchst dich*   *nicht sorgen, wir werden (schon)*
Need   you.DAT not   worry, we will   (SCHON)
noch *eine Lösung finden!*
NOCH a   solution find
'Don't worry, we will find a solution in the end!'

Summary: *still* and *noch*

- *Still* on an aspectual reading can only combine with imperfective and stative predicates.

- When *still* combines with eventive predicates it shows a concessive reading.

- The concessive reading also seems available at the discourse level.

- Like *still*, *noch* can combine with imperfective predicates.

- When *noch* combines with eventive predicates it has an additive reading, which *still* lacks.

- *Noch*, unlike *still*, can also have an additive reading with noun phrases ('another').

- *Noch* lacks concessive readings.

Hebrew: the same clustering of uses

- English only has *still*, German only has *noch*.
- Hebrew has two distinct lexical items, one corresponding to *still* in (all?) its uses, another corresponding to *noch* in (all?) its uses:
  - *ʕadain*
  - *ʕod*

Data: Hebrew ʕadain

(8)   a.   *hi* **ʕadain** *gara im ha-horim.*
        she ADAIN lives with the-parents
        'She is still$_{aspectual}$ living with her parents.'

      b.   *hi* **ʕadain** *nas'a le-sardinya.*
        she ADAIN traveled to-Sardinia
        'She still$_{concessive}$ traveled to Sardinia.'

      c.   **ʕadain**, *hi gara im ha-horim.*
        ADAIN she lives with the-parents
        'Still$_{d-concessive}$, she is living with her parents.'

Generalization: *ʕadain* patterns with *still*.

ʕadain versus ʕod

(9) a. *hi* **ʕadain/ʕod** *gara im   ha-horim.*
         she ADAIN/OD   lives with the-parents
         'She is still$_{aspectual}$ living with her parents.'

  b. *hi* **ʕadain/*ʕod** *nasʻa   le-sardinya.*
      she ADAIN   traveled to-Sardinia
      'She still$_{concessive}$ traveled to Sardinia.'

  c. **ʕadain/*ʕod**, *hi   gara im   ha-horim.*
      ADAIN   she lives with the-parents
      'Still$_{d-concessive}$, she is living with her parents.'

Note: just as with *noch*, (9b) with ʕod is ungrammatical on a
concessive reading but fine with an additive meaning.

ʕod ok versus **ʕadain*

(10) a. *hi hizmina* **ʕod/*ʕadain** *bira*.
     she ordered OD   beer
     'She ordered another beer.'

  b. *hu* **ʕod/*ʕadain** *halax* (*maher*) *liqnot mašehu*.
     he OD   went (quickly) buy.INF something
     'He then also went to buy something.'

  c. *al tid'ag,   anaxnu* **ʕod/*ʕadain**
     NEG worry.3MSG.FUT we   OD
     nimca   pitaron!
     find.1PL.FUT solution
     'Don't worry, we will find a solution in the end!'

Generalization: *ʕod* is different from *ʕadain*.

Summary of the data

- *Still* and *ʕadain* pattern together: they allow aspectual readings with imperfective predicates, but with eventive predicates they can only have a concessive reading.

- *Still* and *ʕadain* can also have concessive readings at the discourse level.

- *ʕod* and *noch* can have aspectual readings with stative predicates (overlap).

  (11) 'She is [*still*/*ʕadain*/*ʕod*/*noch*] living with her parents.'

- *ʕod* and *noch* disallow concessive readings at the VP-level and at the discourse level.

- *ʕod* and *noch* can have additive readings with eventive predicates and noun phrases.

Empirical claims and outlook

- *Still*/ʕ*adain* should not be conflated with *noch*/ʕ*od*: they have different distributions overall.
- In this talk, we focus on *still*/ʕ*adain*; we call them *stretch continuatives*.
- We will not be contributing to the rich literature on *noch*/ʕ*od*.
- More will eventually have to be said about concessive *dennoch*, which is similar to *trotzdem* 'in spite of, still' and seemingly composed of *denn* + *noch*.

The initial aspectual reading

- We take the aspectual meaning of *still*/*ʕadain* to be the one from which the others developed.

- With others we assume that *still*/*ʕadain S* asserts *S*, and that the difference between *S* and *still*/*ʕadain S* lies within the latter's backgrounded component (Löbner 1989, a.o.).

- We assume a temporal presupposition involving a single eventuality to derive stretchiness (Ippolito 2007, a.o.).

- Our analysis of *still*/*ʕadain* involves a counterfactual (and hence modal) component (cf. Michaelis 1993).

The initial aspectual reading (informally)

Assert There is an eventuality s such that P is true of s at time t in the evaluation world w.

Presup – P was true of s at an earlier time t' in w.
           (=temporal presup)
         – There are contextually salient events that would have prevented P from being true of s at t.
           (=counterfactual presup)

The initial aspectual reading: example

(3) She is still living with her parents.

- Asserts: there is an event of her living with her parents at the evaluation time and world.
- Presupposes: the same event holds in the past, and there are contextually salient events that would have prevented her living with her parents now (but they didn't materialize).

The initial aspectual reading: Our proposal

Assert There is an eventuality s such that P is true of s at time t in the evaluation world w.

Presup – P was true of s at an earlier time t' in w.
(=temporal presup)
– There are contextually salient events that would have prevented P from being true of s at t.
(=counterfactual presup)

(12) $[\![still/\text{ʃadain}_{aspectual}]\!]^w = \lambda P\lambda t$
$\exists s : \exists t' < t$ & $P(s)(t')(w)$
& $\exists E[PI(E)(P)(s)(t)(w)$ & $SALIENT(E)]$.
$P(s)(t)(w)$.

Where $[\![PI(E)(P)(s)(t)(w)]\!] = $ True iff
$\forall w'\forall e[ACC_{hist}(w')(w)$ & $E(e)$ & $IN(e, w')$ & $\tau(e) < t \to$
$\neg P(s)(t)(w')]$

More on the backgrounded components

(13)   *hi*   **ʕadain** *gara im*   *ha-horim*?
      she ADAIN lives with the-parents
      'Is she still living with her parents?'

(14)   *im hi*   **ʕadain** *gara b-a-bayit*,   *lo*   *nipageʃ*.
      if   she ADAIN lives at-the-home, NEG meet.FUT.1PL
      'If she is still living at home, we won't meet.'

(13) and (14) imply:

– she has lived with her parent in the past (=temporal presup)
– some contextually salient events would have prevented it from being true now (but they did not take place in our world).
(=counterfactual presup)

Note: We cannot test with negation because *still* and *ʕadain* are PPIs, e.g., *She (*does not) still live in London*; Condoravdi (2016).

Stretchiness

- On its aspectual meaning, *still/adain* selects stative, or broadly imperfective, VPs.

- This falls out of our analysis: the very same eventuality s is required to hold in the same world at two different points in time (t and t'). Only stative/imperfective eventualities can do that.

Stretchiness and negation

- The negation of an eventive predicate in the perfect (e.g. *has traveled*) effectively renders it imperfective (cf. *hasn't traveled*).

- We predict that eventive predicates in the perfect are compatible with aspectual *still* when negated (see also Michaelis 1993).

(15)   He still$_{aspectual}$ has*(n't) traveled.

- In Hebrew, where there is no perfect marking, the negation is obligatory for an aspectual reading of *ʕadain* with eventives.

(16)   *hi* **ʕadain** **(lo) nas'a   le-sardinya.*
       she ADAIN NEG traveled to-Sardinia
       'She still$_{aspectual}$ hasn't traveled to Sardinia.' (cf. (8b))

Diachronic development: from aspectual to concessive

- Both *still* and *ʕadain* acquire concessive readings over time:
    - aspectual > concessive > discourse concessive
- How can the change be characterized, semantically?

Development of English *still*

- Middle English: 'silently, motionlessly, meekly, secretly' and the aspectual meaning 'continually, up to this time' (Middle English Compendium)

- Uses with an "adversative notion" paraphrased as 'nevertheless, notwithstanding, yet' are attested from the 18th century (OED)

- The first such examples are ambiguous between an aspectual and a concessive interpretation:

  (17)   For e'en though vanquished, he could argue still.
          (1770, O. Goldsmith, Deserted Village 212)

Development of English *still* ctd.

- The first example with a clear eventive predicate is from the late 19th century:

  (18) I confess I lost hope as she spoke, still I begged for an interview with the incoming teacher. (1885, 'Mrs. Alexander', At Bay vii. 105)

- A fixed phrase *still and all* exhibits properties of the discourse concessive at least from the early 20th century onward:

  (19) 'Still-and-all,' they said, 'it's no use worrying over things y' can't help, is it?' (1963, A. Lubbock, Austral. Roundabout 77)

From aspectual to concessive

- Our proposal: A concessive reading of *still* develops from the loss of the temporal presupposition. What remains is the modal (counterfactual) component.

(20) $[\![still/\text{ʃadain}_{concessive}]\!]^w = \lambda P \lambda t$
      $\exists s : \exists t' < t \;\&\; P(s)(t')(w)$
      $\&\; \exists E[PI(E)(P)(s)(t)(w) \;\&\; SALIENT(E)]$.
      $\mathbf{P(s)(t)(w)}$.

From aspectual to concessive: example

(8b') *hi* **ʕadain** *nasʿa.*
she ADAIN traveled
'She still$_{concessive}$ traveled.'

The meaning of the 'still'-phrase, to which tense would be added:

(21) $[[\text{ʕadain/still [she travel]}]]^w = \lambda t$
$\exists s : \exists E[PI(E)(TRAVEL_{she})(s)(t)(w) \ \& \ SALIENT(E)].$
$\textbf{TRAVEL}_{she}\textbf{(s)(t)(w)}.$

Change in selectional restrictions

- Due to the loss of the temporal presup, concessive *still*/ʕ*adain* only require the predicate P to be true of an eventuality at one point in time (t).

- Stretchiness is no longer required.

- It follows that unlike aspectual readings, concessive readings are not restricted to stative or imperfective predicates.

Counterfactuality in the concessive

- The second (counterfactual) backgrounded component can be detected in the concessive use.

- (8b') presupposes/background-entails that there was a salient event (type) that would have prevented her from traveling (but she traveled nonetheless).

A possible trajectory of change (Take I)

- Aspectual *still*/*ʕadain* occur with stative predicates only.

- This follows on our analysis from the one-event requirement and the temporal presupposition (ultimately, from the word's lexical meaning 'motionless, without change of place or attitude'; OED *still*).

- But, when a (non-inchoative) state holds at a time t it also held at an earlier time t'. The temporal presupposition is redundant with the subset of stative predicates.

- The redundant presupposition may be eliminated without incurring a change in the overall meaning.
  $\implies$ in line with the theory of *Constant Entailments* (Beck, 2012; Beck & Gergel, 2015)

A possible trajectory of change (Take I) ctd.

- Speakers at some point may parse 'still' as lacking a temporal presupposition (perhaps in addition to the original entri(es)).
- The single entry in (20) derives both the concessive and the aspectual meanings.
- The grammar of present-day English/Hebrew could do without the aspectual entry in (12).

Another possible trajectory (Take II)

- The change on our proposal consists of loss of a presuppositional conjunct.
  $\implies$ consistent with the *Semantic Generalization* theory of Condoravdi & Deo (2014); Deo (2015)
- There is an actuation question in this case: why is it the temporal presupposition that is lost and not the counterfactual one?
  - This question doesn't arise for Constant Entailments.
- Simplification of redundancy would predict this, as discussed above.

Back to discourse *still*/ʕ*adain*

(5) **Still**$_{d-concessive}$, she is living with her parents/she traveled to Sardinia.

(8c) **ʕadain/*ʕod**, *hi   gara im   ha-horim.*
     ADAIN   she lives with the-parents
     'Still$_{d-concessive}$, she is living with her parents.'

Properties of the discourse concessive

- This use of *still*/*ʕadain* is characterized by properties of *discourse markers*
  - Clause initial
  - Set off prosodically
  - Relates to preceding discourse and not event progression

  (Schiffrin 1987; Maschler 2009; Levinson 1983; Blakemore 1992)

Extending the analysis

- A concessive meaning is detectable in these uses too: a speech act is made despite what was previously said or implied
- We suggest that this happens when *still*/ʕ*adain* takes scope over an ASSERT operator

Extending the analysis

Informally: There are salient events (of the speaker's being convinced by counter-arguments) that would have potentially interfered with asserting S, but the assertion was made nonetheless.

(22) $[\![still/\text{ʕadain}_{concessive} \ [ASSERT \ S]]\!]^w = \lambda t$
$\exists s : \exists E[PI(E)(ASSERT_S)(s)(t)(w) \ \& \ SALIENT(E)].$
$ASSERT_S(s)(t)(w)$.

Where $[\![PI(E)(P)(s)(t)(w)]\!] =$ True iff
$\forall w' \forall e[ACC_{hist}(w')(w) \ \& \ E(e) \ \& \ IN(e, w') \ \& \ \tau(e) < t \rightarrow \neg P(s)(t)(w')]$

Conclusion

- Imperfective predicates can combine with both additives (*noch*, *ʕod*) and stretch continuatives (*still*, *ʕadain*) to describe an ongoing state: two sources for the same meaning.

- Strech continuatives can moreover express concessive meanings; additives cannot.

- Already in their aspectual interpretation stretch continuatives contain a counterfactual backgrounded component (Michaelis 1993).

- The concessive readings of stretch continuatives arise when the backgrounded temporal component is lost. The differences in selectional properties follow.

Conclusions ctd.

- Concessive readings can also be found at the discourse level. We suggested that the meaning of *still*/*ʕadain* is the same concessive meaning but applies at a higher, speech-act level.

- The temporal component may be lost because for predicates that describe non-inchoative states it is redundant.

- The development of a (concessive) modal interpretation from an originally aspectual one parallels the modal interpretation that arose from an originally just temporal one in other cases, e.g., *eher* and *rather* (Gergel 2009, 2016; Herburger and Rubinstein 2019).

- We've analyzed the diachronic development as semantic change, without resorting to pragmatic inferencing.

Open issues

- At the very beginning, *still* may be purely temporal. How does the counterfactual component arise?
    - One possibility is that this is because aspectual *still*/ʕ*adain* only combine with imperfective predicates; in an adversative context the stretch-continuative may be read not just aspectually but also concessively:

        (17) For e'en though vanquished, he could argue still.
             (1770, O. Goldsmith, Deserted Village 212)

Open issues

- The counterfactual presupposition is intuitively not equally strong in all cases:

(23) a. She is still in diapers.

b. She still wears diapers.

c. She is still wearing diapers.

- But even at its weakest, *still* suggests that things might have been otherwise, i.e., there might have been an interferer. Cf. *#23 is still a prime number*.
    - Possible generalization: The more clearly the predicate describes an interval (no tense < simple present < progressive), the higher the salience of interfering events.

Open issues

- We don't see a parallel effect with the discourse concessive.
- All of the following are concessive at the discourse level, as expected on our analysis.

(24)   a.   Still, she's in diapers.

   b.   Still, she wears diapers.

   c.   Still, she is wearing diapers.

Thank you!

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Still and *noch* unified?

- Previous research has pursued a unifed account:

(25) $\llbracket still \rrbracket = \llbracket noch \rrbracket = \lambda L \lambda x' \lambda x \lambda P : x' \prec_L x$ & $P(x').P(x)$.
In words: interval x' immediately precedes interval x on the scale L, P holds throughout x, and it is presupposed that P also holds throughout x'.

(Beck 2016, 2019)

The differences between aspectual and other uses proposed to reduce to different underlying scales

- aspectual: L is a temporal scale
- concessive: L is a world-ordering scale; not available to *noch*
- (discourse concessive - not discussed)

Still and noch unified?

- Lexical restrictions on allowed scales need to be posited to capture the different meanings of *still* vs. *noch* on Beck's analysis.

- We do not expect lexical restrictions (*ʕadain*/*still* vs. *ʕod*/*noch*) to be uniform across languages.

- The fact that Hebrew *ʕod* and German *noch*, and Hebrew *ʕadain* and English *still* pattern together suggests to us a more fundamental distinction.

- Whereas *ʕod*/*noch* are fundamentally additive (Umbach 2009; Greenberg 2012; Thomas 2018), *still*/*ʕadain* are of a different nature — **stretch-continuative**.