

Structuring aspectual and temporal relations with two Hebrew adverbials, and the semantics/pragmatics of *still*

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Introduction:

- ☒ Yitzhaki 2003 discusses two Hebrew particles intuitively corresponding to the English particle *while*:
 - The particle *be-* (literally: *in*),
 - The inflected particle *beodo* (literally *while-he*):

- (1) *be-[holxo ba-rexov]*_{adjunct} [*pag'a be-dani mexonit*]_{matrix}
in-walk-he in-the-street hit in-Danni car
- (2) *beod[lo holex ba-rexov]*_{adjunct} [*pag'a be-dani mexonit*]_{matrix}
while-he walk in-the-street hit in-Danni car
Both:” While he was walking in the street, a car hit him”

- ☒ In both cases the particles head non-tensed adjunct clauses, which get their tense marking from the (tensed) matrix.
- ☒ Yitzhaki's suggestion: With both *be-* and *beodo* the temporal location of the matrix event (e.g. the car hitting) interrupts / is located within the interval where the adjunct event (e.g. walking in the street) holds.

Main claims and structure of this talk:

- ☒ Section 1: Data: Differences between the distribution and meaning *be-* and *beodo-*
- ☒ Section 2: The semantics of *be-* (temporal coincidence)
- ☒ Section 3: The semantics / pragmatics of *beodo*:
 - Main claim:** The semantics of *beodo* is composed of that of *be-* plus that of *odo* – an inflected form of *still*
 - Developing an analysis of *odo* / *still* based on
 - Traditional claims: assertion and presuppositions of sentences with *still*
 - New claims:
 - The reference time of sentences with *still* / *odo* must be salient / anaphoric (The 'anaphoricity requirement')
 - The 'anaphoricity requirement' is a conversationally triggered presupposition
- ☒ Section 4: Restrictions on the range of aspectual classes of verbs allowed with *beodo*
 - The form of the verb with *beodo* is participial with a progressive-like semantics

Section 1: The data: Three differences between *be-* and *beodo*:

Fact # 1: Differences in the range of temporal relations:

☒ *beodo* expresses only temporal inclusion between the matrix interval (i_m) and the adjunct

interval (i_a) (i.e. $i_m \subset i_a$):

- (3) *beodo kotev et ha-maamar hirgiS dani lo tov*
in-write-he acc. the-paper felt Danni not good
“Writing the paper Danni didn’t feel well”

- (3) can only mean that the time where Danni didn’t feel well is included in the time where Danni wrote the paper.

☒ In contrast, with *be-* we find a wider range of temporal relations:

- (4) *be-kotvo et ha-ma’amar hirgiS dani lo tov*
in-write-he acc. the-paper felt Danni not good
“Writing the paper, Danni didn’t feel well”

☒ (4) can express

- **Temporal inclusion:** $i_m \subset i_a$ (Not feeling well is included in writing the paper).
- **Reversed inclusion:** $i_a \subset i_m$ (Writing the paper is included in not feeling well).
- **Temporal identity:** $i_a = i_m$ (Writing the paper and not feeling well hold at the same time).

Fact # 2: Differences with the adjective *mevugar* (‘old’)

□ The adjective *ca’ir* (‘young’) is fine in the adjunct of both *be-* and *beodo* (see (5)) but *mevugar* (‘old’) is bad with *beodo*, and fine with *be-*(see (6)):

- (5) *be-heyoto / beodo ca’ir, haya dani populari meod*
inhe-be / while-he young, was Danni popular very
“Being young, Danny was very popular”

- (6) (Context: talking about Danni, who died three years ago)
be-heyoto / ??beodo mevugar hirvi’ax Danni harbe kesef
in-he-be / while-he old, earned Danni lots-of money
“Being old, Danny earned lots of money”

Fact #3: Differences in restricting adverbial quantification

□ *be-*, but not *beodo* adjuncts can restrict adverbial quantifiers:

- (7) *be-holxo / ??beodo holex la-‘avoda, ro’e dani lif’amim ‘et ha-ganan*
in-he-go / while-he go to-the-work, see Danni sometimes acc. the- gardener
“Going to work, Danny sometimes sees the gardener”

- (8) *be-heyoto / ??beodo ‘al pisgat ha-har, dani ‘af pa’am lo roce laredet*
in-he-be / while-he on summit the-mountain, Danni never not want to go down
“Being on the summit, Danni never wants to go down”.

Section 2: The semantics of *be-*

- I suggest that *be-* [*pa*], [*qm*] has a uniform semantics (despite the range of temporal relation it expresses), asserting that *i_a* temporally coincides (overlaps) with *i_m*, written as *i_a* > < *i_m* (see Stump 1985, Bonomi 1997 semantics for *when*),
- (9) Temporal coincidence: *i_a* > < *i_m* holds iff $i_a \cap i_m \neq \emptyset$ (i.e. iff *i_a* and *i_m* have a nonempty intersection)
 - For example, (10a) has roughly the truth conditions in (10b):
- (10) a. ***be-kotvo et ha-ma'amar hirgiS dani lo tov***
in-write-he acc. the-paper felt Danni not good
 Writing the paper, Danni didn't feel well"
 b. (10a) is true at *t_c* (speech time) iff
 $\exists e_1, t_1, e_2, t_2 [write(e_1, dani, the\ paper) \wedge t_1 < t_c \wedge at(e_1, t_1)] \wedge [\neg feel\ well(e_2, dani) \wedge t_2 < t_c \wedge at(e_2, t_2)] \wedge t_1 > t_2]$.
 "There is a past time where Danni wrote the paper, and a past time where Danni didn't feel well, and the two time intervals coincide – they have a nonempty intersection"
- Temporal coincidence is flexible enough to cover temporal inclusion ($i_m \subset i_a$), reversed temporal inclusion ($i_a \subset i_m$) and temporal identity ($i_m = i_a$).
- **An apparent problem**: There are *be-* cases with one kind of temporal relation only, e.g. (1) can only express temporal inclusion ($i_m \subset i_a$):
- (1) ***be-[holxo ba-rexov]***_{adjunct} [*pag'a be-dani mexonit*]_{matrix}
in-walk-he in-the-street hit in-Danni car
 "Walking in the street a car hit him"
- Explanation: Sometimes the aspectual classes of the verbs in the adjunct and the matrix limit the range of possible temporal relations.
 - In (1): Achievements (like car hitting, in the matrix) are known to be temporally included in activities (like walking in the street, in the adjunct).
 - This is independently argued for in 'When-Clauses' (Stump 1985, Bonomi 1997), The progressive (e.g. Vlach 1981, Glasby 1998), The perfect (e.g. Portner (2003)), etc.
- ☒ **Conclusion**: A uniform semantics of *be-*: *be-p_a, q_m* asserts that *t_a* and *t_m* temporally coincide. More restricted cases can be accounted for using independently argued for interactions between aspectual classes of verbs.¹

¹ There are also apparent cases of temporal succession with *be-*, that temporal coincidence cannot cover: these are discussed (and rejected) in the appendix.

Section 3: The semantics of *beodo*

- A reminder: Three types of constraints on the *beodo* construction:
 - Fact # 1: It can only express temporal inclusion between i_m and i_a
 - Fact # 2: It is bad with the adjective *old*
 - Fact # 3: It cannot restrict adverbial quantification

3.1 A *still*-based analysis of *beodo*

- The particle *Beodo* is not a simple word but is composed of *be-* plus *odo*
 - *Be-* expresses temporal coincidence (as defined in section 2)
 - *Odo* is the inflected form of *od / adayin* (= *still*) (as in (11)):

(11) *dani odo / adayin yaSen*
Danni still-he / still asleep
 “Danny is still asleep”

- Thus *beodo p, q* is reanalyzed as *be-odo p, q* (i.e. *be-still p, q*) – asserting that the temporal location of *odo p* (*still-p*) coincides with the temporal location of *q*.

- Initial evidence: Adding an explicit *adayin* (‘*still*’) to *be-* and *beodo* gives different results: It is fine with *be-*, but sounds odd and redundant with *beodo*:

(12) *be-heyoto / ??be-odo adayin ‘al ha-‘ec Sama dani klavim novxim*
in be-he / in-he-still still on the-tree heard Danni dogs bark
 “Being still on the tree / ??when he was still still on the tree, Danni heard dogs barking”

- What do we have to assume about the semantics of *still* and *odo* ?
 - Traditionally, sentences like *John is still asleep* are taken to involve three components: an assertion and two presuppositions:
 Löbner 1989, Mittwoch 1993, Krifka 2000:
 - a. *John is still asleep* asserts that $\exists e$ asleep (e, Danni) \wedge at (e, t_c)
 (“John is asleep at the speech time (t_c), i.e. now”)
 Notice: This is equivalent to the assertion of *John is asleep*.
 - b. *John is still asleep* presupposes that $\exists t', e t' \prec t_c \wedge$ asleep (e, Danni) \wedge at (e, t') (\prec stands for the ‘abutting’ relation, following Krifka 2000) (“John is asleep also at a time prior to and abuts the speech time - **The ‘prior time’ presupposition**
 - c. (Michaelis 1993): *John is still asleep* presupposes that it is expected / reasonable that John will stop being asleep at some time after the speech time (i.e. after now) - **The ‘expected cassation’ presupposition**².

²The ‘expected cassation’ presupposition can be derived as an implicature from Krifka’s 2000 approach to *still* according to which (a) *still* is focus sensitive and induces a set of alternatives. Specifically it can be associated with the whole sentence. E.g. *It is still raining* asserts that *It is raining* and has as its alternative *It is not raining* (b) the alternatives are aligned to the right with respect to time (i.e. we consider alternatives (e.g. *it is not raining*) later than the reference time) and (c) the implicature that “the alternative propositions must be considered reasonable, or entertainable” (p.5). We thus get the fact that that *John is still young* implicates that it is reasonable / entertainable that John is not young at some later point – namely exactly the ‘expected cassation’ implication.

- ☒ **To what extent can such an analysis of *still* help us explain the three constraints on the *beodo* construction ?**

3.1.1 Explaining the incompatibility of *beodo* with *mevugar* ('old') (fact #2)

- The “expected cessation” presupposition of *still* and *odo* is easily met with *young* (you can expect someone to stop being young), but not with *old* (once someone is old, you do not expect him to stop being old):
 - (13) ***be-‘odo ca’ir / *mevugar , hirviax dani hamon kesef***
 in-still-he young / *old, earned Danni lots-of money
 “Being-still young / *old Danni earned lots of money”
 - We find the same difference with English *still*:
 - (14) ***Danny is still young / * old***

3.1.2 Explaining quantification facts with *beodo* (fact #3):(Here we will see that the traditional analysis of *still* is not enough...)

- **Observation:** Quantification with the ‘*beodo*’ construction has parallel manifestations with ‘*When*- clauses’ with *still* and *adayin*:
 - (15) ***kSe-dani halax le-beit ha-sefer hu tamid haya meduka***
when-Danni went to-house the-book he always was depressed
 “When Danni went to school, he was always depressed”
- (15) (in both English and Hebrew) is ambiguous between a quantificational reading (“For every event where John went to school there is an event where he was depressed”) and a temporal “background” reading (“In the period where Danny went to school, Danni was depressed in every contextually relevant event / situation’)
- Crucially, when we add *adayin / still* to the sentence (as in (16)) we get one reading only:
 - (16) ***kSe-dani adayin halax le-beit ha-sefer hu tamid haya meduka***
when-Danni still went to-house the-book he always was depressed
 “When Danni still went to school, he was always depressed”
 - Here the ‘background’ reading is available. The quantificational reading is lost.
- ☒ **Conclusion:** When *adayin / still* is present, the sentence cannot restrict quantification.
 - This observation supports our analysis of *beodo* in terms of *still* – neither can restrict adverbial quantification
 - **But how can we explain this general constraint on *still* and *odo* ?**
- **Suggestion:** Sentences with *still* and *odo* are subject to the ‘reference time anaphoricity’ requirement – this is what blocks them from restricting quantifiers:

The 'reference time anaphoricity' requirement:

- **When *still* is present in a sentence, the reference time of the sentence must be contextually salient or anaphoric. In Heim's 1982 terminology - the reference time of *still p* has to be familiar, it cannot be novel.**

- ☒ Notice: Ippolito (2004) has already suggested that *still* has an anaphoric 'familiar', component, but the type of anaphoricity she talks about and the predictions she makes are different from the present ones.

Support for the 'reference time anaphoricity' suggestion: Comparing sentences with and without *still*:

- Simple past tense sentences in English without *still* can be uttered out of the blue, or with no salient past reference time (Kratzer 1998), and they are intuitively asserted to hold at an existentially closed time prior to the speech time:

(17) a. (How's your brother ?)

“Well, he was unemployed, but now he has a job”

- b. $\exists t', e$ ill $t' < t_c \wedge$ unemployed (my brother, e) \wedge at (t', e) (“My brother was unemployed at **some** past time)

- But – when *still* is present, the past tense sentence is bad:

(18) (How's your brother ?)

Well, he was (#still) unemployed but now he has a job

- The claim: (18) is infelicitous because its reference time is novel – it cannot be anaphoric to anything.

- To show that this is indeed the problem with (18) we will look at four types of *felicitous* sentences with *still*

- Unlike the past tense (18) – in all of them the reference time can be anaphoric
- Each uses a different strategy for satisfying the 'anaphoricity requirement':

Strategy # 1: A contextually salient reference time antecedent:

- With a present tense *still*-sentence:

(19a)(How's your brother ?)*Well, he is still unemployed, but we hope he'll find a job soon*

Assertion: $\exists e$ unemployed (my brother, e) \wedge at (e, t_c) (“My brother is unemployed at the speech time (now)“

(Accommodated) presupposition $\exists t', e$ $t' \propto t_c \wedge$ unemployed (my brother, e) \wedge at (e, t') (“My brother was unemployed also before now”)

- The sentence is felicitous even if the fact that John was unemployed before now (i.e. in the past) is not part of the common ground.
- The same happens with hearing out of the blue: ***Be quiet ! The baby is still asleep .***
- In both cases the 'prior time' presupposition of *still* is easily accommodated.

Anaphoricity is met The reference time of *He is still unemployed* is anaphoric to the (contextually salient) speech time.

Parallel in the nominal domain: *He is really handsome* (pointing to / talking about a contextually salient man)

Strategy # 2: A referential antecedent -

- With a past tense *still*-sentence with an explicit time adverbial:

(19b) (*How's your brother ?*) - *Last month he was still unemployed but now he has a job*"

Assertion: $\exists e$ unemployed (my brother, e) \wedge at (e, t) \wedge $t =$ month before t_c ("My brother was unemployed a month before now").

(Accommodated) Presupposition: $\exists t', e t' \propto$ last month \wedge unemployed (my brother, e) \wedge at (e, t') ("My brother was unemployed also before last month")

Anaphoricity is met: The reference time of ***He was still unemployed*** is anaphoric to the explicitly mentioned reference time of the sentence (i.e. last month).

Parallel in the nominal domain: *John_i came in. He_i sat on the chair*

Strategy #3: An existentially closed antecedent

- With a past tense *still*-sentence occurring after another past tense sentence:

(19c) *John knocked on the door. I was still undressed, so I told him to wait.*

Assertion: $\exists e_1, e_2, t, \text{ knock (john, } e_1) \wedge$ at (e_1) \wedge $t < t_c \wedge$ undressed (I, e_2) \wedge at (e_2, t) ("John knocked on the door at some past time t , and I was undressed at that time t ").

(Accommodated) Presupposition: $\exists t', e t' \propto t \wedge$ undressed (me, e) \wedge at (e, t') ("I was undressed also before John knocked on the door").

Anaphoricity is met: The reference time of ***I was still undressed*** is anaphoric to the existentially closed reference time of the previous sentence (***John knocked on the door***).

Parallel in the nominal domain: *A man_i came in. He_i sat on the chair*

Strategy # 4: A quantified over antecedent:

- With past tense *still*-sentences in the scope of quantificational structures:

(19d) *Whenever I came to pick up John from school, he was still eating*

Assertion: $\forall e_1, t$ [came to pick-up- $j(I, e_1) \wedge$ at (e_1, t)] $\rightarrow \exists e_2$ [eating (j, e_2) \wedge at (e_2, t)]

("For every event in every past time t where I come to pick up John, there is an event where John is eating at that past time t ").

Accommodated Presupposition: $\exists t', e t' \propto t \wedge$ eating ($John, e$) \wedge at (e, t') ("John is eating also before I come to pick him up").

Anaphoricity is met: The reference time of ***He was still eating*** in the scope is anaphoric to the reference time of ***I come to pick him up*** in the restriction

Parallel in the nominal domain: *When John owns a donkey_i, he always beats it_i*

☒ In contrast to these felicitous sentences, *still*-clauses are bad when their reference time cannot be anaphoric, e.g.

- In the past tense ***#My brother was still unemployed*** (=18) – the reference time is existentially closed, with no antecedent
- When the *still*-clause appears in the **restriction** of a quantified structure (20):

(20) *#Whenever John was still eating I came to pick him up from school*

Assertion $\forall e_1, t$ [eating (j, e) \wedge at (e_1, t)] $\rightarrow \exists e_2$ [came to pick-up $j(i, e_2) \wedge$ at (e_2, t)]

("For every event in every past time t where John is eating, there is an event where I come to pick him up in that past time t ")

The sentence is infelicitous since anaphoricity is not met: The reference time in ***John was still eating*** is novel - it has no antecedent

- Notice: The time variable (t) in the restriction (*John was still eating*) cannot be anaphoric to the time variable (t) in the scope (*I come to pick him up*)
 - In DRT terms - the scope is not only linearly after the restriction, it is also 'lower' and inaccessible to it.

Parallel in the nominal domain : #*When John owns it, he always beats it / a donkey*

- **Back to beodo:**
- We claimed that the reference time of sentences with *still* must be anaphoric, and this is what blocks them from restricting quantification. (In the restriction the reference time cannot be anaphoric).
- Assuming a 'still-based' analysis of the *beodo* construction (where *odo* has the semantics of *still*) explains then why this construction cannot restrict quantification either (**fact #3**):
 - Here too the reference time cannot be anaphoric.

3.1.3 Explaining temporal inclusion with beodo (Fact #1)

- A quick reminder: *beodo p, q* necessarily assert that the q event in the matrix is temporally included in the p event in the adjunct ($i_q \subset i_p$).
- The suggestion: What guarantees temporal inclusion (as opposed to the more flexible temporal coincidence with *be-*) is the combination of
 - The 'prior time' presupposition on *odo*, **plus**
 - The 'reference time anaphoricity' requirement on *odo*
- But there is an apparent problem with assuming the anaphoricity requirement on odo...
 - Unlike the good sentences with *still* we saw before ((19a)-(19d)), in the *be-odo p, q* construction, *odo p (still p)* appears in the beginning of the sentence, and does not seem to have any antecedent reference time - explicit, contextually salient or quantified - before it.

- **Question**: So – what is going on ? Why is *be-odo p, q (be- still p, q)* felicitous ?

- **Answer**: Because the *beodo* construction uses another strategy for satisfying the anaphoricity requirement:

Strategy # 5: Backward anaphora (A theory-neutral notion):

Parallel in the nominal domain:

- (21) a. *When he_i saw me, John_i was really surprised*
 b. *If it_i is overcooked, a hamburger_i usually doesn't taste good* [Chierchia 1995, p.129]

- In (21a) and (21b) the reference of the pronoun in the adjunct is anaphoric to that of the noun in the matrix - although the matrix appears linearly later.
- Similarly, with *be – odo p, q* the reference time of the adjunct - *odo p* - is anaphoric to the reference time of the matrix - *q* - although the matrix appears linearly later.

- For example, In (22) the reference time of writing the paper (the adjunct p), will be required to be anaphoric to that of not feeling well (the adjunct q):

(22) ***Be-[odo kotev et ha-ma'amar]***_{adjunct} [***hirgiS dani lo tov***]_{matrix}
 in-still-he write acc. the-paper felt Danni not-well
 “When [he was still writing the paper]_{adjunct} [Danni didn't feel well]_{matrix}”

- ☒ If this is indeed the case, then combining this ‘backward anaphora’ assumption with the prior time presupposition on *odo* (*still*) we can immediately derive the temporal inclusion ($i_q \subset i_p$) of the *beodo* construction (e.g. derive the fact that in (22) not feeling well is understood as temporally included in writing the paper):
- ☒ This is schematically described in (23), where ===== represents the ‘prior time’ presupposition:

(23) =====|----- running time of *odo p* (still writing the paper)
 ----- running time of *q* (didn't feel well)

- **Notice:** Using the **traditional** definition of *still* in the semantics of the *beodo* construction **cannot** guarantee inclusion:
 - Using the traditional definition, *be-odo p, q* presupposes that *p* holds before the reference time for odo p ('prior time' presupposition for *still p*)
 - But crucially – it does not require that *p* also holds before the reference time of q (since *p* is not required to be temporally anaphoric with *q*)
- Thus, the traditional assertion +presupposition can be met in (24), with no inclusion :

(24) ===||----- running time of *odo p* (still writing the paper)
 ----- running time of *q* (didn't feel well)

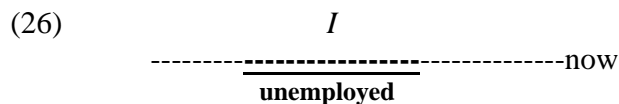
- ☒ The fact that in reality inclusion **is** expressed by the *beodo* construction indicates that anaphoricity **is** indeed an integral part of the semantics of *odo*.

3.1.4 Status and triggering of the ‘anaphoricity’ requirement:

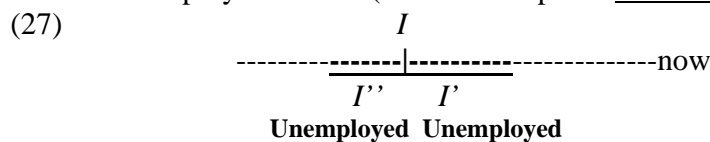
- We saw that assuming the ‘reference time anaphoricity’ requirement on *still* and *odo* helped us explain a variety of facts about sentence containing these particles.
- **But what is the status of this requirement ?** (part of the assertion ? a presupposition? An implicature ?)
- ☒ The anaphoricity requirement on *still* survives in (25a-c) -
 (25) **a. Was John still asleep ?**
b. It's possible that John was still asleep
c. if John was still asleep, his mother was angry at him
- ☒ All of these sentences are very odd when no contextually salient past time is present in the common ground:
- ☒ The ‘reference time anaphoricity’ requirement on *still*, then, seems to be a presupposition.
 - **But if so - what triggers it ?**

A suggestion - The basic idea is that presupposing that *p holds before time t* (the 'prior time' presupposition of *still*) is not meaningful / informative enough if *t* is not salient / familiar.

- More precisely: Without the anaphoricity requirement, the 'prior time' presupposition of *still p* may be met too easily, or even trivially.
 - Suppose that all you know is that *John was unemployed*, i.e. that there is some past interval (*I*) where "John is unemployed" is true



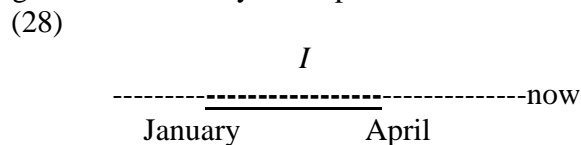
- Crucially: Without requiring anaphoricity of *still*, The information in (26) is enough to guarantee that both the assertion and the 'prior time' presupposition for *John was still unemployed* are met:
- Given the information in (26) one can automatically infer (27), that is:
 - a. That there is an past interval *I'* (a subinterval of *I*) where John was unemployed (assertion of *John was still unemployed*)
 - b. And that there is another subinterval of *I*, *I''*, such that *I''* \subset *I'* where John was unemployed as well ("Prior time" ps. of *John was still unemployed*)



- Thus, given the traditional definition of *still*, the paradoxical result is that once you know that *John was unemployed* (in 26), you can automatically infer that *John was still unemployed* (in 27).
- Specifically, the 'prior time' presupposition on *still* is trivially met.

But this presupposition is the main contribution of *still* to the sentence (remember: the assertion of *still p* is just like that of *p*) - if this presupposition is trivially met then using *still* is unjustified – it is vacuous.

- In contrast, if we require that the reference time is identified with another reference time – i.e. anaphoric – the presupposition **cannot** be trivially met:
 - Suppose it is known that John was unemployed at some **salient** time interval in the past, e.g. between January and April



- If we want to utter now *Between January and April John was still unemployed* there should be a time **prior to January** (and abuts it) where John was unemployed as well
- Unlike the previous case, the information about such a prior time **cannot** be inferred on the basis of (28) - it has to exist in the common ground, or to be accommodated by the listener.
- Hence, the use of *still* is not trivial, not vacuous, and is thus justified.

Back to status and triggering of the ‘reference anaphoricity requirement’

- We can thus say that the anaphoricity requirement on *still p / odo p* is some sort of **conversational** presupposition –
 - It is triggered by the need ensure that the ‘prior time’ presupposition of *odo p / still p* - i.e. the **semantic** presupposition - is not trivially met.

Summary of the semantics / pragmatics of *odo p / Still p*

Assertion: p holds at reference time t

‘Prior time’ presupposition (semantic / conventional): p holds before t (and abuts t)

‘Reference time anaphoricity’ presupposition (pragmatic / conversational): t is anaphoric to another reference time / familiar

Section 4: A further constraint on *be-odo*: concerning aspectual classes of verbs:

- Both *be-* and *beodo* can have activity, accomplishments and interval state verbs in their adjuncts (Yitzhaki 2003):
 - (29) ***Be-holxo / beodo holx ba-rexov ra’a dani et rina***
in-walk-he / while-he walk in-the-stree saw Danni acc. Rina
“Walking in the street, Danni saw rina”
 - (30) ***be-xacoto / beodo xoce et ha-kviS pag’a bo mexonit***
in-cross-he / while-he cross acc. the-road hit him car
“Crossing the road a car hit him”
 - (31) ***be-yoSvo / beodo yoSev ‘al ha-mita cilcel ha-telefon***
in-sit-he / while-he sit on the bed rang the-phone
“Sitting on the bed the phone rang”
- However achievements are odd with *Beodo*, but fine with *be-* (Yitzhaki 2003):
 - (32) ***be-hagi’o / ??beodo magi’a la-pisga hitxila sufa xazaka***
in-he-reach / ??while-he reach to-the-summit started storm strong
“Reaching the summit, a strong storm began”
- Similarly, momentary states are bad with *beodo* (Yitzhaki 2003) but much better with *be-*:
 - (33) a. ***be-yodo’ / *beodo yode’a et ha-tSuva, herim dani et yado***
In-he- know / while-he know acc. the-answer, raised Danni acc. his-hand
“Knowing the answer, Dani raised his hand” (incohesive)

³ The *be-* particle has here and in other cases nontemoral interpretations as well., e.g. a “causal” interpretation (Yitzhaki 2003), saliently found with typical individual level predicates. Hence *be-* is very similar to English free adjuncts, which exhibit the similar variability of interpretations (see Stump 1985).

b. *?be-ohavo / *beodo 'ohev et rina haya dani me'uSar yoter mi-ey pa'am*
in-he-love / while-he love acc. Rina, was Danni happy more from- ever
 "Loving Rina, Danni was happier than ever" (non-incohesive)

- ☒ One can claim that achievements are bad in the adjunct of *beodo* because of the requirement for temporal inclusion: the matrix event cannot be temporally included in an achievement event.
- ☒ But such an explanation won't work for the incompatibility of *beodo* with momentary states (events can be considered intuitively included in momentary states)

Suggestion:

- The form of verb with *beodo* is participial, with a progressive-like semantics.
- This explains the aspectual sensitivities of *beodo*

- ☒ The form of verb with *beodo* is participial

(34) a. *beodo kotey et ha-maamar cilcel ha-telefon*
while-he write acc. the-paper, ring-past the-phone
 "While he was writing the paper the telephone rang"

b. *ra'iti 'et dani kotey 'et ha-ma'amar*
I-saw acc. Danni writing acc. the-paper
 "I saw Danni writing the paper"

- Stump 1985 discusses free adjuncts with participial verbs as in (35), and claims they have the semantics of the progressive:

(35) *Lying on the beach, John smoked a cigar*

- ☐ We can assume that when the main predicate of the adjunct of *beodo* is a verb – it also has the semantics of the progressive (e.g. a Landman 1992 style semantics).
 - This explains why the lexical aspect sensitivities of the verbs with *beodo* are the same as the progressive:
 - ☐ Bad with achievements and momentary states,
 - ☐ Good with activities, accomplishments and interval states

- Such an hypothesis is further supported by the observation that for many informants, the (questionable) *beodo* version of (36) induces an 'imperfective paradox':

(36) *be-hagi'o / ??beodo magi'a la-pisga hitxila sufa xazaka*
in-he-reach / ??while-he reach to-the-summit started storm strong
 "Reaching the summit, a strong storm began"

- For these informants the *beodo* version can be true even if he eventually didn't reach the summit. In contrast, in the *be-* version reaching the summit necessarily took place.
- Thus, the *beodo* version here patterns like well known progressive achievements (discussed in e.g. Rothstein 2004).

Appendix: Apparent cases of temporal succession with *be-*:

- **A reminder:** We claimed (in section 2) that *be-p, q* asserts that *p* and *q* temporally coincide.
- **But there are apparent counterexamples to this claim:** *Be-p,q* seems to be able to express not only temporal inclusion and identity, but also temporal succession:

$$\bullet \quad i_a < i_m$$

- (1) ***be-hagi'o la-misrad magi'a lamisrad cilcel dani le-iSto***
in-he-reach to-the-office, called Danni to-his-wife
“Arriving to the office, Danni called his wife”

$$\bullet \quad i_m < i_a$$

- (2) ***be-nos'o nos'a le-alaska, 'araz lo dani bgadim xamim***
in-he-go to-Alaska, packed him Danni cloths worm
“Going to Alaska, John packed some warm clothes”

- ☒ Temporal coincidence cannot capture the apparent cases of temporal succession (no overlapping interval)
- Solution: I suggest that real temporal succession with *be-* is impossible in Hebrew (unlike English free adjuncts):
 - (3) ****be-ceto min ha-bayit be-SeS, higia dani la-bank be-Seva***
in-he-leave from the-house at-six, arrived Danni to-the-bank at-seven
“Leaving the house at six, Danni arrived to the bank at seven”,
- Apparent cases of succession can be attributed to ‘imprecision’ (Stump 1985).
 - In (1) we interpret also the few minutes after Danni entered the office as part of his arrival to the office. I.e. the arrival is extended forward
 - In (2) we interpret also the preparatory parts of the travel to Alaska as part off the travel. I.e. the moment of starting the travel is extended backward
 - Support for this move:
 - The extent to which the actual arrival moment can be extended varies depending on our real world knowledge of the adjunct and matrix predicates:
- (4) ***be-hagi'o le-roma, halax dani le-vaker et rina***
in-he-arrive to-Rome, went Danni to-visit acc. Rina
“Arriving to Rome, Danni went to visit Rina”
- (5) ***be-hagi'o le-'amerika, hexlit dani le-hafox le-nagar***
in-he-arrive to-America, decided Danni to-become to-carpenter
“Reaching America, Danni decided to become a carpenter”
- In (4) Danni may have visited Rina also a few hours / days after he the actual arrival, where as in (5) (e.g. Where Danni immigrate to America) he may have decided that a few weeks / months after the actual arrival.

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