

Discontinuous past: a semantic account¹

1. Introduction

- In some languages past tense markers contribute nearly uncancellable cessation inferences (roughly, the inference is that the described state is over or the result state of an event does not hold at the time of utterance)
- Cable (2017) based on (Plungian and van der Auwera 2006): Discontinuous Past effects arise in optional tense languages.
- Cable (2017) offers a *pragmatic* account of Discontinuous Past in Tlingit: whereby the Discontinuous Past effects arise from the optionality of the past-tense marker in question.
- The prediction of the pragmatic account is that if there is a language where past marking is optional and where the non-future tense has the same properties as the non-future tense in Tlingit, it will show the same pattern.
- We are bringing new data from Tundra Nenets (a Uralic Samoyedic language spoken in the Far North of Russia) where we find an optional past marker, but we do not find discontinuous past phenomena – cessation inferences are easily cancellable.
- Notably, other research on optional past languages like Washo and Wolof (Bochnak 2016; Bochnak & Martinovic 2019) demonstrated that cessation inferences are also easily defeasible in these languages.
- This raises the question: what is responsible for this crosslinguistic variation between optional past languages?
- We propose a semantic account of Discontinuous Past, where such effects arise from applying Exh to past tense sentences, rather than from the meaning of Past itself.
- We argue that our account explains the variation in DP-effects across optional past languages (through the obligatoriness parameter of Exh).

2. Discontinuous past

Use of the past tense on a stative in English triggers a so-called cessation inference. An utterance of (1)a in an out-of-the-blue context gives rise to the inference in (1)b.

- (1) a. John was sick.
b. **Inference:** John is no longer sick.

This inference is easily cancellable in English; thus, it was classified as an implicature (Musan 1995, 1997; Magri 2011; Thomas 2012, 2014; Altshuler & Schwarzschild 2013).

¹ We thank Hedde Zeijlstra, Seth Cable, Clemens Mayr, the participants of the semantics colloq of the University of Göttingen, the members of the Semantics & Pragmatics group at ZAS for their helpful comments and suggestions. All errors are our own. Vostrikova's work is funded by DFG, project number 457168471.

(2) John was sick. In fact, he is still sick.

This, however, does not hold for all languages. In some languages discourses like (2) are infelicitous.

Two illustrative examples from Tlingit² are given (3) and in (4), where, unlike English, cessation inferences cannot be canceled by a direct refutation claim (Cable 2017).

Data from Cable 2017:

(3) Tle yá ts'ootaat dágáawé táayin Joe.
Then this morning indeed IMP.3sgS.sleep.Past Joe

#Ch'a yeisú tá
just still Impf.3sgS.sleep.Bare

Indented: 'This morning, Joe was indeed sleeping. He's still sleeping now.'

(4) Yá ts'ootaat ch'a kuk'éiyin.
this morning just Impf.good.weather.Past

#Ch'a yeisú kuwak'éi.
just still Impf.good.weather.Bare

Indented: 'This morning, the weather was nice. It's still nice now.'

Past tense with this property was dubbed 'Discontinuous past' as it appears to encode discontinuity in its semantics.

It has been claimed that all the languages that have 'Discontinuous past' have another property in common – they are optional past languages (Plungian and van der Auwera 2006, Cable 2017).

3. Optional past

Optional past languages lack present tense.

Instead, they draw a distinction between the non-future tense (morphologically unmarked, also referred to as 'bare' in the literature) and the past tense.

This is illustrated with the example from Tlingit below, where a past-oriented when-clause is compatible with the past marking but does not require it³.

from Cable 2017:

² Na-Dene; Alaska, British Columbia, Yukon

³ There is a variation in optional past language with respect to the capability of non-future marked stative matrix clauses to describe past events, however non-future-marked eventive clauses can always describe past eventualities (cf. Bochnak et al. 2019).

(5) Dziyáak Joe xwasateení, du yaagú alyéix
earlier Joe 3O.Pfv.1sgS.see.SUB his boat 3O.Impf.3sgS.build.Bare
'When I saw Joe earlier, he was building his boat.'

(6) Dziyáak Joe xwasateení, du yaagú alyéixin
earlier Joe 3O.Pfv.1sgS.see.SUB his boat 3O.Impf.3sgS.Past
'When I saw Joe earlier, he was building his boat.'

The same 'bare' marking is used to express a statement about the present time.

(7) Ch'a yeisú kuwak'úi.
just still Impf.good.weather.Bare
'The weather is still good now.'

4. The challenge posed by OP languages

The absence of the present tense poses a challenge for the popular approach to the derivation of the cessation inference.

It has been claimed that such inferences are quantity implicatures in English, derived through pragmatic reasoning (e.g.: Altshuler and Schwarzschild 2013).

If we adopt the quantificational semantics for tense and The Open Interval Hypothesis for states (cf. Altshuler and Schwarzschild 2013), the present tense alternative is stronger: if there is a present moment when John is sick, there must be at least one past moment when he was sick.

(8) $[[\text{John was sick}]]^{t_0} = T \text{ iff } \exists t[t > t_0 \ \& \ \text{John is sick at } t]$

(9) $[[\text{John is sick}]]^{t_0} = T \text{ iff } \exists t[t = t_0 \ \& \ \text{John is sick at } t]$

(10) **The Open Interval Hypothesis** (Altshuler and Schwarzschild 2013):
The run-time of a state is an open interval. For any state *s*, which obtains at an interval *t*, there is an interval *t'* such that *t'* < *t* and *s* obtains at *t'*.

Under the assumption that the present tense alternative is stronger, the cessation inference can be understood as a standard quantity implicature, similar to scalar implicatures.

Obviously, given that there is no present tense in Optional Past languages, the reasoning cannot proceed in the described way.

5. Two approaches to DP (Discontinuous Past)

The semantic approach:

The existing semantic approach argues that discontinuity is a part of the semantics of a discontinuous past marker (Plungian & van der Auwera 2006, Leer 1991; Copley 2005).

Thus, this theory posits the existence of languages where the past tense includes an additional feature that encodes cessation.

According to this perspective, past tense is not uniform across languages and Universal Grammar allows for variations in the features that T heads can bear.

The pragmatic approach

Cable 2017 offers two main arguments against the semantic approach.

Argument 1: This approach does not account for the crosslinguistic link between the optionality of the past tense and discontinuous past effects reported in (Plungian & van der Auwera 2006).

Why do we not find ‘discontinuous past’ markers in languages of other type?

Argument 2: Even though cessation inferences triggered by the past tense in Tlingit are not compatible with claims that directly contradict the inference, they are compatible with the statements of ignorance about the current state.

Cable 2017:

(11) Yeisù dzyiáak táayín.
 Still earlier Impf.3sg.sleep.Past

Hél xwasakú ch’a yeisú shákdé tá.
NEG 3O.PFV.1sgS.know just still DUB Impf.3sgS.sleep.Bare

‘Well, he was sleeping earlier. I don’t know if he is still sleeping.’

(12) Ha, áa yéiteeyín.
 EXCLM there.at *Impf.3sgS.be. Past*

Tlél xwasakú ch’a yeisú áa yéi teeyí.
NEG 3O.PFV.1sgS.know just still there.at Impf.3sgS.be.SUB.Bare

‘Well, he was there. I don’t know if he’s still there.’

This, of course, is incompatible with the approach that encodes the cessation inference into the meaning of the past tense itself.

Cable (2017) proposes that cessation inferences in Tlingit are pragmatic in nature.

Their difference from cessation inferences in English in terms of cancellability is due to the absence of the present tense in Tlingit.

Due to this, cessation inferences cannot be derived via Gricean reasoning.

Cable (2017) adopts pronominal semantics for tense.

(13) $[[\text{Past}_i]]^{g,t_0} = g(i)$, defined only if $g(i) < t_0$

(14) $[[\text{Bare}_i]]^{g,t_0} = g(i)$, defined only if $\neg g(i) > t_0$

‘Bare’ is compatible with the present and the past tense reference.

But more importantly, ‘bare’ can refer to time intervals spreading from a certain past time up to the present moment.

Cessation inferences are derived via a post-semantic rule that compares the ‘assertability’ of candidate sentences, a general pragmatic principle akin to ‘Maximize presupposition’.

(15) Include UT inside the TT, whenever possible

If the speaker *can* assert a sentence where the Topic Time (TT) contains the Utterance Time (UT), then they *must* assert that sentence.

‘Bare’ by its semantics is not required to make reference to the present tense.

But by the principle in (15), its preferred interpretation is the one that extends to the present time (if this is compatible with the speaker’s knowledge).

The cessation inference of the past marked sentence is derived in the following way:

- the speaker used a past tense stative whose T-node denotes a past time t'
- the bare alternative could potentially extend up to the utterance time
- given the principle in (15), the fact that the bare alternative was not used means that it is not assertable in the context.
- Thus, the speaker either knows that the state does not extend to the present or does not know whether it does.

6. Tundra Nenets as a challenge for the pragmatic approach

- The pragmatic account aims to explain the connection between the optionality of past and the obligatoriness of the cessation implicature.
- The pragmatic reasoning process is universal and should apply in any language.
- If the bare tense and the past tense in a language have the same semantic properties as the bare tense and the past tense in Tlingit, the language should behave the same way with respect to the cessation inference as Tlingit.
- However, Nenets does not seem to exhibit the predicted behavior.
- Cessation inferences triggered by the use of a past tense are easily cancellable.
- Moreover, other optional past languages described in the literature also show the pattern similar to English

6.1. Temporal marking and resulting interpretations in Tundra Nenets

In Nenets

- there exists a past temporal marker (*s'*)
- reference to past events and states is also possible with bare predicates that do not carry this marker.⁴

A past marker is not obligatory with past-oriented adverbials

- (16) Vera xardaxanda tet chasxana to.
Vera house.to four hours.at come.Pfv.Bare
'Vera came home at 4.'
- (17) Vera xardaxanda tet chasxana to.s'.
Vera house.to four hours.at come.Pfv.Past
'Vera came home at 4.'
- (18) Chas puna Vanya xony.
Hour ago Vania sleep.Impf.Bare
'An hour ago, Vania was sleeping.'
- (19) Chas puna Vanya xony.s'.
Hour ago Vania sleep.Impf.Past
'An hour ago, Vania was sleeping.'
- (20) Nebyanda tova^h mal'ngana, Olga urokda setabi
Mother-her coming when, Olga lesson-her do.Impf.Bare
'When her mother came, Olga was doing her homework.'
- (21) Nebyanda tova^h mal'ngana, Olga urokda setabi.s'.
Mother-her coming when, Olga lesson-her do.Impf.Past
'When her mother came, Olga was doing her homework.'

The preference for the present tense interpretation of Bare predicates in the absence of a past-oriented adverbial

In the absence of past-oriented adverbials, bare predicates in matrix clauses can refer to present or past:

- Perfective Bare predicates refer to past times

- (22) Vanya to.
Vania come.Pfv.bare
'Vanya came.'

⁴ Native speakers are divided on this issue. One of our five consultants rejects sentences where a stative verb with bare tense refers to a past interval, such as in (18) and (20). However, all speakers accept sentences like (16), where a bare-marked perfective verb refers to a past interval. The descriptive literature is also split: Nikolaeva (2014) states that bare imperfectives can refer to past intervals only in narrative texts, while Tereschenko (1947) reports that imperfective verbs with bare marking can refer to past intervals.

- With statives in out of the blue contexts, the preferred interpretation of bare tense is equivalent to the present tense

(23) Vanya xony.
Vania sleep.Impf.Bare
Suggested interpretation: ‘Vanya is sleeping’

(24) Olga urokda sertabi
Olga lesson-her do.Impf.Bare
Suggested interpretation: ‘Olga is doing her homework.’

To get the past interpretation, a past-oriented adverbial has to be used or some other material in the sentence should signal that we are talking about a past time.

(25) Masha tyuku knigam^h tolabi, teda^h pyda xony.
Masha this book read.Impf.Bare, now she sleep.Impf.Bare
‘Masha was reading this book, she is sleeping now.’

(26) Vanya xony, teda^h pyda manzara pjada.
Vanya sleep.Impf.Past, now he work started.Prf.Bare
‘Vanya was sleeping, now he began to work.’

6.2. No DP in Tundra Nenets

In Nenets, cessation inferences:

- arise in out of the blue contexts;
- are cancellable both with ignorance claim and with direct refutation claims.

Cessation Inferences arise with Past imperfectives

(27) Vanya xony.s'.
Vanya sleep.Impf.Past
‘Vanya was sleeping’
Inference: ‘Vanya is not sleeping anymore’.

Cessation Inferences are cancellable with a direct refutation of the cessation

(28) (Chas puna)Vanya xony.s', pyda tamna xony.
Hour ago Vania sleep.Impf.Past, he still sleep.Bare
‘(An hour ago,) Vania was sleeping, and he is still sleeping.’

(29) (Xuv' numda) sava.s', teda^h tamna sava.
Morning weather good.Impf.Past, now still good.Bare
‘The weather was good (in the morning), now it is still good’

Cessation Inferences are cancellable with a statement of ignorance

(30) (Chas puna)Vanya xony.s'. Teda' man' xonjuvamda jexeradm^h.
(Hour ago) Vania sleep. *Impf.Past* Now I sleep.NOM not-know
'(An hour ago,) Vanya was sleeping. I don't know if he is sleeping now.'

(31) (Xuv^h numda) sava.s', teda^h man' xurka ŋevamda jexeradm^h.
Morning weather good. *Impf.Past*, now I which be.NOM not-know
'The weather was good (in the morning), I don't know what it is like now.'

The generalization about Optional Past in Tundra Nenets:

- Cessation inferences are invited by the usage of Past, but they are not mandatory.
- They can be cancelled both by a direct refutation and by a statement of ignorance.
- In this sense, the Optional past in Tundra Nenets differs from the Optional past in Tlingit, where cessation inferences can only be suspended by the statement of ignorance.

The challenge posed by Tundra Nenets

- Tundra Nenets has the same past tense as Tlingit.
- Cessation inferences in Tundra Nenets are suspendable.
- Such a variation is not predicted under the pragmatic account.
- An alternative explanation is required.

7. The proposal

Our account involves:

(i) extending the grammatical approach to implicature generation using Exh (Fox 2007, Chierchia et al. 2012 a.o.) to cessation inferences (cf. Magri 2011; Thomas 2012, 2014; Sharvit 2018);

(ii) suggesting that variation lies in Exh's obligatoriness - mandatory in DP languages like Tlingit, optional in Tundra Nenets;

(iii) accounting for Tlingit's past-marked statements compatibility with the ignorance statements by optionally merging a K-operator between Exh and the prejacent (Meyer 2013; Fox 2016; Crnić 2021; Buccola & Haida 2020).

We follow Cable (2017) and adopt the pronominal semantics for bare and past tenses, treating the bare tense as non-future (Matthewson 2006).

- (32) $\llbracket \text{Past}_i \rrbracket^{g,t_0} = g(i)$, defined only if $g(i) < t_0$
(33) $\llbracket \text{Bare}_i \rrbracket^{g,t_0} = g(i)$, defined only if $\neg g(i) > t_0$

We propose the LF in (34) for the first sentence in example in (35) (repeated from before):

(34) [Exh_{ALT} [Past_{IF} Joe be sleeping]]

(35) Tle yá ts'ootaat dágáawé táayin Joe.
Then this morning indeed Impf.3sgS.sleep.Past. Joe

#Ch'a yeisú tá.
just still Impf.3sgS.sleep.Bare.

Indented: 'This morning, Joe was indeed sleeping. He's still sleeping now.'

The alternatives are computed by making a substitution in the position of the tense pronoun by varying both the index and the temporal morpheme.

(36) ALT_{str} = {Past₁ Joe be sleeping, Past₂ Joe be sleeping, Past₃ Joe be sleeping, Bare₄ Joe be sleeping, Bare₅ Joe be sleeping....}

Exh asserts the prejacent and negates all non-entailed alternatives, excluding those where the pronoun refers to the subintervals of $g(1)$. The predicted meaning of (34) is in (37).

(37) $\llbracket(34)\rrbracket^{t_0} = 1$ iff Joe was sleeping at $g(1)$ & $\forall t'[-t' \subseteq g(1) \rightarrow \neg \text{Joe is sleeping at } t']$
 $\llbracket(34)\rrbracket^{t_0}$ is defined only if $g(1) < t_0$

- The hearer does not know which past interval the speaker is referring to.
- However, there is always an alternative where the tense is bare, and its index is mapped to the current moment.
- Negating this alternative leads to the inference that the state does hold at now.

To account for the suspendability of cessation implicatures by statements of ignorance in Tlingit, we propose that (38), where K is a silent universal modal contributing speaker certainty, is the LF for the first sentence in (39).

(38) [Exh_{ALT} [K [Past_{IF} Joe be sleeping]]]

(39) Yeisù dzyiáak táayin.
Still earlier Impf.3sgS.sleep.Past

Hél xwasakú ch'a yeisú s hákdé tá.
NEG 3O.PFV.1sgS.know just still DUB Impf.3sgS.sleep.Bare
'Well, he was sleeping earlier. I don't know if he is still sleeping.'

The prejacent of Exh gets the interpretation shown in (40). Each of the alternatives will also have this K-operator, as shown in (41).

(40) $\llbracket [K [Past_{IF} \text{ Joe be sleeping}]] \rrbracket^{t_0, w_0} = 1$ iff $\Box_{w_0, w} \text{ Joe was sleeping}_w$ at $g(1)$

(41) ALT_{str} = {[K [Past_{IF} Joe be sleeping]], ... [K [Bare_{5F} Joe be sleeping]] ...}

The overall predicted resulting interpretation of this LF is shown in (42).

- (42) $\llbracket(40)\rrbracket^{w_0, t_0} = 1$ iff $\Box_{w_0, w'}$ Joe was sleeping w' at $g(1)$ & $\forall t'[-t' \subseteq g(1) \rightarrow \neg \Box_{w_0, w'} \text{ Joe is sleeping } w' \text{ at } t']$;
 $\llbracket(40)\rrbracket^{w_0, t_0}$ is defined only if $g(1) < t_0$

These truth-conditions can be informally paraphrased as: ‘I am certain that Joe was sleeping during the past interval $g(1)$, but I am uncertain whether he was sleeping at other past intervals or whether he is sleeping now’.

While this correctly accounts for the possibility of modal suspension of the cessation inference, it is still predicted that a past statement in Tlingit cannot be combined with a claim that directly contradicts the cessation inference.

Continuing (46) with ‘Joe is still sleeping’ will still contradict the truth conditions in (42) as they entail that the speaker is ignorant about the current state.

We propose that these mechanisms are available in Tundra Nenets as well, however exhaustification is not mandatory there, thus, the cessation inferences triggered by the past tense are cancellable.

The variation in the DP-effects provides empirical support (the first to our knowledge) for the treatment of the cessation inference in terms of syntactically represented Exh, akin to scalar implicatures.

The modal suspension of the cessation inference in Tlingit backs the notion of a syntactically represented K-operator.

8. Other areas with similar parametrization

The account we propose raises an important question: are there other areas where we observe a similar cross-linguistic parametrization of the obligatoriness of Exh?

Exceptive constructions have been argued to involve Exh (Hirsch 2016; Crnič 2021; Mayr & Vostrikova 2023), with Exh responsible for deriving the exceptive inference.

We observe a similar variation in the obligatoriness of this inference.

In English, the exceptive inference introduced by *but* is not cancellable:

- (43) All boys but Vanja are here.
The inference: Vanja is not here.

- (44) #Vanja is here. All boys but Vanja are also here.

In German, the exceptive inference is triggered by the use of *aufßer* in out-of-the-blue contexts. However, this inference is cancellable:

(45) Alle Jungs außer Vanja sind hier
All boys außer Vanja are here
'All boys except Vanja are here'.

Inference: Vanja is not here

(46) Vanja ist hier. Und alle Jungs außer Vanja sind auch hier.
Vanya is here. And all boys außer Vanja are also here
'Vanya is here. All other boys are also here'.

9. Is there a link between optional past marking and discontinuous past?

- We saw that DP effects do not arise in all OP languages.
- Our proposal doesn't link past tense optionality to DP-effects, we anticipate them in languages with mandatory past marking too.
- Korean provides initial support for this idea and, thus, it presents an additional challenge for the theory that derives DP effects from optionality.

Korean is not an optional past language. In Korean past marking is mandatory with past-oriented adverbials.⁵

(47) *Ecey Con.i Aphu.ta.
Yesterday John.NM sick.Pres.DEC
Intendent: Yesterday John was sick.

(48) Ecey Con.i Apha.ass.ta
Yesterday John.NM sick.Past.DEC
Yesterday John was sick.

There are two types of past marking: singular past and double past (Kim 1975, Lee 2019). According to our consultant, both types of past marking trigger cessation inferences in out-of-the-blue contexts.

Thus, (49) said in an out-of-the-blue context suggests that Jo is no longer present.

(49) Co.nun keki iss.ess.ta.
Jo.TOP there exist.Past.DEC
'Jo was there'.

(50) Co.nun keki iss.ess.ess.ta.
Jo.TOP there exist.Past.Past.DEC
'Jo was there'.

However, only the cessation inference triggered by single past marking can be directly refuted.

⁵ We thank Jeonghee Myeong for the Korean data.

(51) Co.nun keki iss.ess.ta. Kunye.nun acik.to keki iss.ta
Jo.TOP there exist.Past.DEC She.TOP still.even there exist.DEC
 ‘Jo was there. She is still there’.

(52) Co.nun keki iss.ess.ess ta.
Jo-TOP there exist.Past.Past.DEC

#Kunye.nun acik.to keki iss.ta
She.TOP still.even there exist.DEC
 Intended: ‘Jo was there. She is still there’.

Like in Tlingit, the cessation inference triggered by the discontinuous past marker (double past) can be modally suspended.

(53) Co.nun keki iss.ess.ess ta.
Jo-TOP there exist.Past.Past.DEC

Kunye.ka acik.to keki iss.nunci molu.keyss.ta
She.NM still.even there exist.COMP not.know.DEC

‘Jo was there. I don’t know if she is still there

10. Why is there no blocking of past-oriented uses of bare by maximize presupposition?

Given the lexical entries we adopted from Cable 2017, the presuppositions of the bare tense are strictly weaker. Consequently, the use of bare tense with past tense adverbials should be banned by *Maximize Presupposition!* (Sauerland 2002).

- (54) $[[\text{Past}_i]]^{g,t^0} = g(i)$, defined only if $g(i) < t_0$
 (55) $[[\text{Bare}_i]]^{g,t^0} = g(i)$, defined only if $\neg g(i) > t_0$

The solution to this problem offered in Bochnak 2017 is that past is structurally more complex as it consists of an index and a past feature, whereas bare does not have a syntactically represented feature. Due to the difference in their complexity, they do not compete.

- (56) a. The structure of the past tense: $[[\text{past}] [\text{T}_n]]$
 b. The structure of the bare tense $[\text{T}_n]$

In Tundra Nenets, there might be a different answer to this question.

The bare tense can refer only to the time that does not stand too far away from the time of evaluation.

This is evidenced by the fact that bare tense is not compatible with such adverbials as ‘long time ago’.

(57) Context: The father did not see the son after school. He asks the mother: "Where is Vanya?". Mother's answer:

Vanja ɲa^hna xarda.xana to*(s')
Vanya long-ago home.to came(Past)
 'Vanya came home long time ago'

What is far away from now is contextually determined. In (57) 'long time ago' is incompatible with bare even though it was on the day of speaking. In (58) bare is compatible with 'last year', but not compatible with 'three years ago' in (59).

(58) Xayuvy poxona Vanya ɲanom' temda.
Last year Vanya boat buy
 'Last year, Vanya bought a boat.'

(59) Njaxar po' puna Vanya ɲanom' temda*(s')
Three years ago Vanya boat buy(Past)*
 "Three years ago, Vanya bought a boat."

Past tense is compatible with any past-oriented adverbials.

(60) Vera tandaja to.s'.
Vera just come.Pfv.Past
 'Vera just came home'

We modify the lexical entry for the bare tense accordingly (shown in (61)):

(61) $[[\text{Bare}_i]]^{g,t_0,c} = g(i)$, defined only if $g(i)$ distance from t_0 does not exceed θ_c
 θ_c is a threshold determined in the context

The presupposition of bare is not weaker or stronger than the presupposition of the past tense.

11. Other optional past languages

- Cessation implicatures have been reported for the past tense in other optional past languages.
- But the observed pattern is similar to Nenets and not to Tlingit.

Washo (Native American language isolate) (Bochnak 2017)

- Sentences containing the past tense are often found in a discourse where the second sentence directly states cessation.

(62)
 t'ɛ:liwhu p'arti-ya ?-é?-uɲil-i-ɲa ?-í:yewe?-i
 man party-LOC 3-be-PAST-IND-but 3-go.hence-IND

'The man was at the party, but he left.'

- Cessation inference occurs in out of the blue contexts:

(63)

a. Context: I haven't seen Steven for a while, but heard he had been sick, so I ask you how he's been doing lately.

b. Steven (watlí:) git-hámu-ʔáŋaw-**uŋil**-i
Steven this.morning 3REFL-feel-good-PAST-IND

'Steven was feeling good (this morning).'

Speaker comment: "Sounds like he got sick again."

- However, these inferences are cancellable, like in Nenets:

(64)

a. Context: We're discussing the very hot weather we've been having.

b. baŋáya wa-yásaŋ-šému-**yūŋil**-i-ŋa hálaŋa wa-yásaŋ-šému-yi
outside STATIC-hot-really-PAST-IND-but still STATIC-hot-really-IND

'It was hot outside before, and it's still really hot!'

(65)

a. Context: You were planning to go to Reno, so I call you to see if you got there ok, and if you're still there.

b. lí:nuya lí: lébiʔuŋiliŋa hálaŋa wáʔ léʔi
li:nu-a li: le-ibiʔ-uŋil-i-ŋa haláŋa waʔ le-eʔ-i
Reno-LOC PRT 1-come-PAST-IND-but still there 1-be-IND

'I got to Reno, and I'm still there.'

Wolof (a language of Senegal, the Gambia, and Mauritania, and the native language of the Wolof people) shows the same pattern (Bochnak & Martinovic 2019):

- Cessation inferences arise in out of the blue context:

(66)

Tiit-óon-na-a.

afraid-PST-C-SCL.ISG

'I was afraid (but I am not now).'

(Torrence 2012: 26)

- They are, however, not mandatory:

(67)

Context: A judge poses question (a) to a witness, who replies with (b–c):

- a. Lan nga gis bi nga xool-e neeg bi?
what C.SCL.2SG see when SCL.2SG look.at-ANT room the.SG
‘What did you see when you looked at the room?’
- b. Làmp bi tàkk-oon-na-∅. Am-oon-na-∅ benn tééré
lamp the.SG be.alight-PST-C-SCL.3SG. have-PST-C-SCL.3SG one book
bu ubbeeku si kaw taabal bi.
c be.open on top table the.SG
‘The light was on. There was an open book on the table.’
- c. Tééré wolof la-∅ (woon).
book Wolof C-SCL.3SG (PST).
‘It was/is in Wolof.’

12. Conclusion

We presented a semantic account of cessation inferences in optional past languages, motivated by the absence of a stronger present tense alternative in these languages. Additionally, we demonstrated that the pragmatic approach to DP fails to account for the crosslinguistic variation in the mandatoriness of DP effects across optional past languages.

References

- Abusch, D. 1997. Sequence of Tense and Temporal De Re. *Linguistics and Philosophy*. 20(1). Pp. 1–50.
- Altshuler, D. and R. Schwarzschild. 2013. Moment of change, cessation implicatures and simultaneous readings. *Proceedings of Sinn Und Bedeutung*. 17. Pp. 45–62.
- Bochnak, M R, V. Hohaus, and A. Mucha. 2019. Variation in tense and aspect, and the temporal interpretation of complement clauses. *Journal of Semantics* 36:407–452. Buccola & Haida 2020
- Bochnak, M R. 2017. Sequence of optional tense. *Proceedings of SALT* 27: 636–654.
- Bochnak, M. R, and Martina Martinović. 2019. Optional past tense in Wolof. In *African linguistics across the disciplines: Selected papers from the 48th annual conference on African linguistics*, eds. Samson Lotven, Silvina Bongiovanni, Phillip Weirich, Robert Botne, and Samuel Gyasi Obeng, 187–202. Berlin: Language Science Press.
- Bochnak, M. R. 2016. Past time reference in a language with optional tense. *Linguistics and Philosophy* 39: 247–294.
- Buccola B., Haida A. 2019 Obligatory Irrelevance and the Computation of Ignorance Inferences. *Journal of Semantics*. 36(4): 583-616 (2019)
- Cable, Seth. 2017. The implicatures of optional past tense in Tlingit and the implications for ‘discontinuous past’. *NLLT*. 35: 635–681.
- Chierchia G, Fox D, Spector B. 2012. Scalar implicature as a grammatical phenomenon. In *Semantics: An International Handbook of Natural Language Meaning*, Vol. 3, ed. C Maienborn, K von Stechow, P Portner, pp. 2297–331. Berlin: De Gruyter
- Copley, B. 2005. O’odham cem: When the actual world isn’t inertial. In *Semantics of underrepresented languages in the Americas (SULA) 3*, eds. Michael Becker and Andrew McKenzie, 17–34. Amherst: Graduate Linguistics Student Association.
- Crnič, L. 2021. Exceptives and exhaustification. In *Proceedings of WCCFL* 39.

- Fox, D. 2007. Free choice disjunction and the theory of scalar implicatures. In: U. Sauerland & P. Stateva (eds.). *Presupposition and Implicature in Compositional Semantics*. NY, 71–120.
- Fox, D. 2016. On why ignorance might be part of literal meaning. Commentary on Marie-Christine Meyer. MIT Workshop on Exhaustivity. Cambridge.
- Hirsch, A. 2016. An unexceptional semantics for expressions of exception. In *University of Pennsylvania Working Papers in Linguistics*, Volume 22.
- Kim, N-K., 1975. The double past in Korean. *Foundations of Language* 12, 529–536.
- Kusumoto, K. 1999. Tense in embedded contexts: University of Massachusetts at Amherst. Doctoral dissertation. University of Massachusetts, Amherst.
- Lee, E.H. 2019. *Korean Syntax and Semantics*. Cambridge University Press.
- Leer, J.. 1991. The schetic categories of the Tlingit verb. PhD Diss., U. of Chicago.
- Magri, G. 2009. *A Theory of Individual-Level Predicates Based on Blind Mandatory Implicatures. Constraint Promotion for Optimality Theory*. Doctoral Dissertation, MIT.
- Magri, G. 2011. “Another argument for embedded scalar implicatures based on oddness in downward entailing environments”, *Semantics & Pragmatics* 4(6), 1-51.
- Matthewson L. Temporal semantics in a superficially tenseless language. *Linguistics & Philosophy* 29: 673–713.
- Matthewson, L. 2004. On the methodology of semantic fieldwork. *International Journal of American Linguistics* 70: 369–415.
- Mayr, C. and E.Vostrikova. 2023: A unified semantics for exceptive-additive 'besides' *Proceedings of Sinn und Bedeutung* 27, pp. 399-416
- Meyer M.-C. 2013. *Ignorance and Grammar*. PhD. thesis, MIT.
- Musan, R. 1995. On the temporal interpretation of noun phrases. Doctoral dissertation, MIT.
- Musan, R. 1997. Tense, Predicates, and Lifetime Effects. *Natural Language Semantics*. 5.3: 271–301.
- Nikolaeva I. 2014. *A Grammar of Tundra Nenets* Walter de Gruyter GmbH, Berlin/Boston
- Ogihara, Toshiyuki, and Yael Sharvit. 2012. Embedded Tenses. In R. I. Binnick (Ed.), *The Oxford handbook of tense and aspect*. Oxford University Press. Pp. 638–668.
- Plungian, V. A., and J. van der Auwera. 2006. Towards a typology of discontinuous past marking. *Sprachtypologie und Universalienforschung (STUF)* 59: 317–349.
- Sauerland, U. 2002. The present tense is vacuous. *Snippets* 6: 12–13.
- Sharvit, Y. 2018. Sequence of Tense: Syntax, Semantics, Pragmatics. In P. Patel-Grosz et al. (eds.), *Pronouns in Embedded Contexts at the Syntax-Semantics Interface*, *Studies in Linguistics and Philosophy* 99: 215-247
DOI 10.1007/978-3-319-56706-8_7
- Tereshchenko, N. M. 1947. *Ocherk grammatiki neneckogo (jurako-samoedского) jazyka* [A study in the grammar of the Nenets (Yurak Samoyedic) language]. Leningrad: Uchpedgiz.
- Thomas, G. 2012. *Temporal Implicatures*. Doctoral dissertation. MIT.
- Thomas, G. 2014. Nominal tense and temporal implicatures: evidence from Mbyá. *Nat Lang Semantics* 22, 357–412. <https://doi.org/10.1007/s11050-014-9108-2>
- Tonhauer, J. (2007). Nominal Tense? The meaning of Guaraní nominal temporal markers. *Language* 84(4), 332–342.
- Torrence, H. 2012. *The clause structure of Wolof: Insights into the left periphery*. Amsterdam: John Benjamins.
- Heim, I. 1994. Comments on Abusch’s theory of tense. In H. Kamp (Ed.), *Ellipsis, Tense and Questions*, Amsterdam, pp. 143–170. University of Amsterdam