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Discontinuous past: a semantic account

Intro: Existing semantic accounts of the so-called ‘discontinuous past’ (DP) argue that there can be past markers with the meaning “past and not present” (Plungian and van der Auwera (P&A) 2006). Recently, they’ve faced criticism, and the pragmatic view has gained momentum (Cable 2017; Bochnak 2016; Bochnak & Martinovic 2019). Building on original fieldwork on Tundra Nenets, we provide arguments against the pragmatic view and propose a novel semantic account where DP-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 (OP) languages (through the (non)-obligatoriness of Exh).

The phenomenon of the discontinuous past: Altshuler and Schwarzschild (2013) argue that past statives imply cessation inferences (CI) (‘Al was sick’; CI: ‘Not sick any more’). In English, CIs are easily cancellable (with a continuation like ‘In fact, Al is still sick’). In some languages, such as Tlingit, similar discourses are infelicitous, as shown (1) (Cable 2017), where the bare (temporally unmarked) clause, but not the past-marked one, is compatible with a continuation contradicting the CI). Based on similar data, P&A 2006 argue that there are DP-markers that obligatorily trigger CIs. It was observed that they are common in optional past (OP) languages, like Tlingit (P&A, 2006; Cable 2017).

- (1) Tle yá ts’ootaat dágáawé tá /#táayin Joe.
Then this morning indeed IMP.3sgS.sleep/#IMP.3sgS.sleep.PST Joe
Ch’a yeisú tá.
just still IMP.3sgS.sleep

‘This morning, Joe was indeed sleeping. He’s still sleeping now.’ (Cable 2017)

The semantic-pragmatic debate. The **semantic approach** encodes DP-effects in the meaning of the past tense morpheme (Leer 1991; P&A 2006). This suggests that Universal Grammar allows for variations in the features T heads can bear. Cable (2017) challenges the semantic view by complementing (1) with cases like (2), where past-marked sentences are compatible with statements of ignorance about the current state.

- (2) Yeisù dzyiáak táayin.
Still earlier IMP.3sg.sleep.PST
Hél xwasakú ch’a yeisú shákdé tá.
NEG 3O.PFV.1sgS.know just still DUB IMP.3sgS.sleep

‘Well, he was sleeping earlier. I don’t know if he is still sleeping.’ (Cable 2017)

Cable’s **pragmatic account** explains DP-effects as arising from the competition between past-marked and unmarked (bare) alternatives. It connects DP-effects with the optionality of past marking and the availability of the ‘bare’ alternative that is preferably interpreted as extending to the present time, hence a use of the past morpheme signals CI.

Our empirical contribution. Based on original fieldwork, we describe another OP language, Tundra Nenets (Uralic, Samoyedic), focusing on DP-effects. In Tundra Nenets, temporally unmarked clauses are compatible with both present and past interpretation (but not with future interpretation). The past temporal marker *s*’ can optionally appear in clauses with the past time reference, as illustrated in (3). In the absence of an adverbial the present tense interpretation of the bare tense is preferred.

- (3) Chas puna Vanya xony /xonys’
Hour ago Vania sleep.IMP / sleep.IMP.PST
‘An hour ago, Vania was sleeping.’

Unlike Tlingit, cessation inferences in Tundra Nenets, prompted by the past tense, are easily cancellable by a statement of ignorance, as well as by a direct refutation: both (4a) and (4b) are acceptable as continuations of (3).

- (4) a. Teda'xonjuvamda man' jexeradm' b. Pyda tamna xony.
Now sleep.NOM.3sg I not-know.1sg *He still sleep.IMP*
 'I don't know if he is sleeping now.' 'He is still sleeping.'

Nenets data as a problem for the predictions of the pragmatic account. Assuming that pragmatic reasoning is universal, we should also expect other OP languages to exhibit the same effects as Tlingit. However, Tundra Nenets data show that there is variation: in Tlingit-type OP-languages, CIs are cancellable only by an ignorance statement, whereas in Nenets-type OP languages, they are cancellable in both configurations. Notably, other research on OP languages like Washo and Wolof (Bochnak 2016; Bochnak & Martinovic 2019) demonstrated that CIs are also defeasible there across both types of contexts.

Theoretical contribution: capturing obligatory CIs and crosslinguistic variation.

Our account involves: (i) extending the grammatical approach to implicature generation via Exh (Fox 2007, Chierchia et al. 2012 a.o.) to CIs (cf. 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; Crnič 2021; Buccola & Haida 2020). We adopt the standard pronominal semantics for bare and past tenses (cf. Cable 2017), treating the bare tense as non-future (Matthewson 2006).

- (5)a. $[[\text{Past}_i]]^{g,t} = g(i)$, defined only if $g(i) < t$ b. $[[\text{Bare}_i]]^{g,t} = g(i)$, defined only if $\neg g(i) > t$
 We propose the following LF for the example (1) from Tlingit:

- (6) $[\text{Exh}_{\text{ALT}} [\text{Past}_{\text{IF}} \text{Joe be sleeping}]]$

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

- (7) $\text{ALT}_{\text{str}} = \{\text{Past}_1 \text{Joe be sleeping}, \text{Past}_2 \text{Joe be sleeping}, \text{Past}_3 \text{Joe be sleeping}, \text{Bare}_4 \text{Joe be sleeping}, \text{Bare}_5 \text{Joe be sleeping}, \dots\}$

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 (6) is in (8).

- (8) $[[\text{(6)}]]^{t_0} = 1$ iff Joe was sleeping at $g(1)$ & $\forall t[-t \subseteq g(1) \rightarrow \neg \text{Joe is sleeping at } t]$; 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 (9), where K is a silent universal modal contributing speaker certainty, is the LF for (2). The prejacent of Exh gets the interpretation shown in (10). Each of the alternatives will also have this K operator, as shown in (11).

- (9) $[\text{Exh}_{\text{ALT}} [\text{K} [\text{Past}_{\text{IF}} \text{Joe be sleeping}]]]$

- (10) $[[\text{K} [\text{Past}_{\text{IF}} \text{Joe be sleeping}]]]^{t_0, w_0} = 1$ iff $\Box_{w_0, w} \text{Joe was sleeping}_w$ at $g(1)$

- (11) $\text{ALT}_{\text{str}} = \{[\text{K} [\text{Past}_{\text{IF}} \text{Joe be sleeping}]], \dots, [\text{K} [\text{Bare}_{\text{5F}} \text{Joe be sleeping}]] \dots\}$

The overall predicted resulting interpretation of this LF is shown in (12).

- (12) $[[\text{(9)}]]^{w_0, t_0} = 1$ iff $\Box_{w_0, w} \text{Joe was sleeping}_w$ at $g(1)$ & $\forall t[-t \subseteq g(1) \rightarrow \neg \Box_{w_0, w} \text{Joe is sleeping}_w$ at $t]$; 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. 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.

Conclusions: The variation in the DP-effects provides empirical support for the treatment of CI in terms of syntactically represented Exh. Our proposal doesn’t link past tense optionality to DP-effects, we anticipate them in languages with mandatory past marking too. Udmurt and Korean (P&A 2006) provide initial support, but more research is needed.

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