Two ways to be non-inertial: frustrativity and event maximality in O'dam

Across languages, **frustrative markers** are described as grammatical elements which modify an actual situation by indicating the unexpected non-realization of some salient associated outcome (cf. Overall 2017). Frustratives operate at the aspect-modality interface; their precise range of interpretations depends on language-specific resources for marking these grammatical categories (Copley & Harley 2014, Cable 2017, Carol & Salanova 2017, Kroeger 2017, Davis & Matthewson 2022). We contribute to the emerging semantic and typological picture by reporting on two frustratives in O'dam (Uto-Aztecan; García Salido & Everdell 2020): *tɨi* (glossed below as FRST) and *tɨip(up)* (FRST.NONMAX). Drawing on data collected via firsthand fieldwork, we argue that the contrastive use of these particles reflects two distinct ways in which the characteristic counter-to-expectation contribution of frustrativity can be semantically encoded: either via a strong commitment to the non-maximal realization of the marked clause (cf. Davis & Matthewson 2022), or via a weak commitment to the non-stereotypical continuation of the reference situation (cf. Kroeger 2024).

A key analytical puzzle comes from the (crosslinguistically robust) observation that frustrative-marked clauses may differ with respect to how much of the eventuality described in the marked clause is actually realized in the evaluation context. **Canonical** (or 'proper'; Carol & Salanova 2017) frustrative claims entail the full realization of an embedded event description, but indicate that this event does not have its expected result (shown for O'dam *tɨi* in 1a). Elsewhere, frustratives license progressive-like **incompletive** interpretations, where the embedded event is only partially realized (see 2); these differ from standard progressive claims in emphasizing the speaker's lack of commitment to the completion of the target eventuality. **Avertive** readings are also widely attested: these readings do not permit any part of the embedded event to be realized, locating 'frustration' prior to the event's point of initiation (see 3). In their analysis of the Tohono O'odham frustrative *cem* (historically related to O'dam *tɨi*, *tɨipup*), Copley & Harley (2014) propose that the three types of reading in (1)-(3) can be explained by assuming that *cem* asserts the realization of an *aspectually-modified* situation in its scope, but presupposes that this situation develops in an unexpected (causally abnormal or astereotypical; cf. Davis & Matthewson 2022) way: 'proper', incompletive, and avertive readings arise in composition with perfective-, imperfective-, and prospective-modified situations, respectively.

(1) **Canonical or 'proper' frustrativity:** possible with *tɨi* (FRST) but not *tɨipup* (FRST.NONMAX)

a. *Ap tɨi mua dhi-ñi ko'*
2SG.SBJ FRST kill.SG DEM.PROX-VIZ snake
'You killed this snake (but someone else took it to eat it)'

b. *Ap tɨipup mua dhi'-ñi ko'*
2SG.SBJ FRST.NONMAX kill.SG DEM.PROX-VIZ snake
Intended, impossible: #You successfully killed this snake but...
Actual interpretation (avertive): 'You almost killed this snake (but it escaped)'

(2) **Incompletive frustrativity:** possible with both O'dam frustratives

a. *Añ tɨi nɨira-' gu camion*
1SG.SBJ FRST wait-IRR DET bus
'I'm waiting for the bus (but it still has not come)' [said while you are waiting]

b. *Añ tɨipup nɨira-t gu camion*
1SG.SBJ FRST.NONMAX wait-IMPF DET bus
'I was waiting for the bus (but it never came)'

(3) **Avertive frustrativity:** possible with both O'dam frustratives

a. *cham bia'-iñ gu popotes, tɨi ba-ja-saba'n-mɨra-k-añi-ch mu tienda*
NEG have-1SG.SBJ DET chips FRST CMP-3PL.PO-buy-MOV-PNCT-1SG.SBJ-PFV DIR store
'I don't have chips, I was on my way to buy them at the store (but I turned around)'

b. *tɨipup* *jii-ñi-ch* *mu tienda*
FRST.NONMAX go.PFV-1SG.SBJ-PFV DIR store
'I almost went to the store (but I never even left and now I won't/can't go).'

An analysis along the lines of Copley & Harley (2014) is complicated by the distributional and interpretive variation shown in the O'dam examples above: the two O'dam frustratives partition the interpretive space typically occupied by a single marker. The more permissive *tɨi* (FRST) licenses all three—'proper', incompletive, and avertive—readings. By contrast, *tɨipup* (FRST.NONMAX) in (1b) cannot license 'proper' frustrativity, blocking any reading in which the underlying event is fully (maximally) instantiated. Thus, while the particles share a frustrative core—that an actual situation does not develop stereotypically—*tɨipup* apparently narrowly constrains the target of frustration to some part of the underlying event predicate P: this suggests (contra Copley & Harley) that *tɨipup* must have semantic access to P as well as its aspectually-inflected instantiation. Moreover, as seen in (2)-(3), *tɨi*'s incompletive and avertive uses are weaker than those of *tɨipup* (and Tohono O'odham *cem*) in that only the latter fully settle non-realization of the relevant outcome at speech time: (2a), for instance, indicates that its speaker does not expect a successful resolution to their waiting, but does not rule out the possibility that the bus may eventually arrive.

Focusing initially on the effects of frustrativity on telic predicates, we propose a unified semantics for *tɨi* and *tɨipup*, deriving their contrasts from a difference in how frustrated expectation is realized: in terms of non-inertial development or reference to event (non-)maximality. Building on Nadathur & Filip (2021), we assume that the denotation of an uninflected telic predicate P contains both partial and maximal (culminated) events, unified by the requirement that all events $e \in [\![P]\!]$ are ones which develop to P-maximality in stereotypical (causally normal) contexts. We propose that O'dam frustratives take two arguments: an (extensional) partitive aspectual operator (ASP $\in \{$MAX, NONMAX$\}$;[1] see 5) and an uninflected event predicate P. Both particles assert the realization of a situation s verifying ASP(P), but they differ presuppositionally: as shown in (4a), *tɨi* requires that s actually develops non-stereotypically (leaving the status of its expected outcome unresolved), while *tɨipup* in (4b) imposes the strictly stronger constraint that s does not actually lead to a maximal P-eventuality.

(4) a. $[\![\text{tɨi}(\text{ASP}, P)]\!]^{c,w} := \lambda t.\text{ASP}(P, t, w) \,\&\, \partial(w \notin \text{INR}(c, w, t))$,
where $\text{INR}(c, w, t)$ is the set of maximally causally normal futures projected from context c in world w at time t

b. $[\![\text{tɨipup}(\text{ASP}, P)]\!]^{c,w} := \lambda t.A(P, t, w) \,\&\, \partial(\text{NONMAX}(P, t, w))$

(5) a. $\text{MAX}(P, t, w) = 1$ iff $\exists e.\tau(e) \circ t \,\&\, e$ in $w \,\&\, P(e) \,\&\, \forall e'[P(e') \,\&\, e \sqsubseteq e' \rightarrow e' = e]$

b. $\text{NONMAX}(P, t, w) = 1$ iff $\exists e.\tau(e) \circ t \,\&\, e$ in $w \,\&\, P(e) \,\&\, \exists e'[P(e') \,\&\, e \sqsubset e']$

This immediately predicts the lack of 'proper' frustrativity for *tɨipup* (since its presupposition is incompatible with MAX(P)), but derives incompletive readings where *tɨipup* composes with ASP = NONMAX. The 'weak' frustrative *tɨi* is compatible with both forms of ASP. We analyze avertive readings for both particles as special cases of incompletivity, arising where a predicate P is coerced into a (telic) predicate of preparatory *inchoative* eventualities for P before composing with aspectual and frustrative marking (cf. Kroeger 2024 on Kimaragang frustrativity).

Modulo (language-)specific assumptions about event structure and aspect, we maintain a connection between 'proper' frustrativity, incompletivity, and avertivity while deriving the behaviour of O'dam frustratives along similar lines to Copley & Harley: parametric variations in frustratives' modal entailments are used to explain contrasts in interpretative range. Looking ahead, reference to event maximality vs. non-inertia correctly predicts the results of composing O'dam frustratives with (atelic) predicates as well as the distribution of *optative* and counterfactual uses; the analysis also offers a straightforward pragmatic explanation for systematic patterns in the default temporal orientation of frustrative claims (see, e.g., 2a vs. 2b).

[1] We refrain from directly identifying the event-partitive (NON)MAX operators with imperfective and perfective marking due to idiosyncracies of the O'dam aspectual system which cannot be detailed here for reasons of space.

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