

Decomposing the ‘experiential’ perfect: The view from Atayal and Javanese

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Perfect aspect

- At least 3 uses:
(e.g., McCawley 1971; Leech 1971; Comrie 1976, 1985; Binnick 1991, a.o.)
 - (i) **Experiential perfect**
I've occasionally driven without my license.
 - (ii) **Resultative / Perfect of result**
Policeman (on road): *Can I see your license please?*
Driver: *I've left it at home.*
 - (iii) **Universal perfect**
The meaning of the perfect has been debated for over 200 years.

Examples from Mittwoch (2008:324)

Experiential perfect

- (1) Bill has been to America. (Comrie 1976:59)
- (2) Q: Do you know my brother?
A: No, I haven't met him. (adapted from Dahl 1985:140)
- Dahl (1985:141):
“The basic use [...] is in sentences in which it is asserted (questioned, denied) that **an event of a certain type took place at least once** during a certain period up to a certain point in time.”
 - Dahl (1985): 8 languages overtly encode experiential perfect:
 - **Javanese, Sundanese, Indonesian (Austronesian)**;
Thai (Tai-Kadai); Mandarin Chinese (Sino-Tibetan);
Japanese (Japonic); Itsekiri, Sotho (Niger-Congo)

Questions

- How can we better understand ‘experiential perfect’ as a purported grammatical category?
 - Does this ‘category’ behave like a perfect in other ways?
 - Does this ‘category’ behave like an aspect?

Proposal

- Comparative case study on
 - Javanese (WMP) *tau*
 - Squliq Atayal (Formosan) *-in-*
- We propose that *tau/-in-*, which have a dominant experiential perfect reading, is not a subcategory of perfect aspect, but an *existential past tense*.

Roadmap

1. Arguments against *tau/-in-* being a (present) perfect
2. Arguments against *tau/-in-* being an aspect
3. Proposal: *tau/-in-* as existential past tense markers
4. Arguments against *tau/-in-* being a referential past tense
5. Concluding remarks

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✓ Experiential reading

- (3) A: Sampean **tau** menek gunung Merapi toh? **JAV**
2SG TAU climb mountain Merapi FOC
'Have you ever climbed Mount Merapi?'
- B: Iyo, aku **tau** gelek menek gunung iki.
yes 1SG TAU often climb mountain DEM
'Yes, I often climbed that mountain.'
- (4) Context: 'Has he ever hunted?' 'Yes, ...' **ATL**
q<m><n>alup mit sraral hiya'.
hunt<AV><IN> goat before 3S.N
'He has hunted goats before.'

✓ Experiential reading: ‘Repeatability’ effect

(5) a. Pak Zaini **tau** ketemu presiden SBY ping papat. JAV
Mr. Zaini TAU meet President SBY time four
‘Pak Zaini met President SBY four times.’

b. # Mas Adi **tau** meninggal.
Mr. Adi TAU AV.leave.this.world
Intended for ‘Mr. Adi passed away.’

(6) a. m-<in>sazing m-wah m-ita’ isu’ laha’ la. ATL
AV-<IN>two AV-come AV-see 3S.N 3P.N PRT
‘They came to see you twice.’

b. # m-<in>huqil la.
AV-die<IN> PRT
Intended for ‘He passed away.’

No resultative reading

- The use of **tau/-in-** strongly implies that the **relevant state ceases to hold**, a property opposite to that of the perfect:

(i) John has arrived. (Comrie 1976:56)

(7) Context: *Now he is not at Wisata Bahari Lamongan (WBL).*

JAV

Bapak-mu (wes) **tau** melbu nok WBL mbiyen.
father-your already TAU enter at WBL before

‘Your father entered into WBL in the past.’

(8) Context: *Describe to your friend how you lost your watch and found it.*

ATL

m-<**in**>gzyuwaw tuki=maku’.
AV-<IN>lost watch=1S.GEN

‘My watch got lost.’

No universal perfect reading

- Similarly, *tau/-in-* can not convey that the meaning of the predicate **holds** from some point in the past **up to the present**; cf. (i):

(i) I have been sick since 1990. (Iatridou et al. 2001:155)

(9) Context: *You moved to Jember from Paciran in 2014 & you still live there now.*

Aku **tau** manggon nek Jember sampai 2014.
1SG TAU live in Jember since 2014

JAV

Intended for 'I have lived in Jember since 2014.'

(10) Context: *My nephew is a big boy! Ever since his birth, his size has been bigger than the average kid's.*

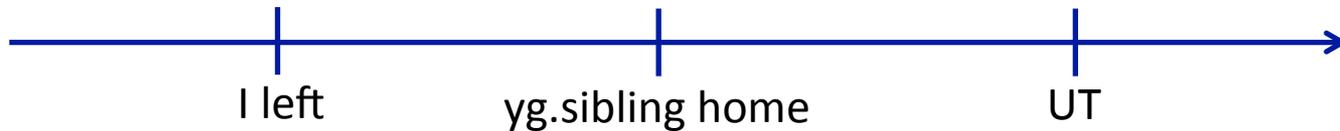
m-<in>krahu' hi'=nya' aring squ m-htuw.
AV-<IN>big body=3S.GEN start.AV LOC AV-come.out

ATL

Intended for 'His body has been big since he was born.'

No past-perfect use

- The use of *tau*/*-in-* is infelicitous in the context of **ET < RT < UT**, while the perfect allows anteriority:
 - When my sibling got home yesterday, I had already left.



- (11) # Pas adik-ku muleh wingi, aku **tau** metu. **JAV**
 when yg.sibling-my return yesterday 1SG TAU go.out
 ('When my younger sibling got home yesterday, I had already left.')
- (12) # mwah=saku' shira' lga, m-<**in**>busuk kwara' naha' la. **ATL**
 AV-come=1S.ABS yesterday PRT.TOP AV-<IN>drunk all 3P.GEN PRT
 ('When I came yesterday, they had already got drunk.')

No 'lifetime' effect

- The use of *tau*/*-in-* is felicitous with a remote past time interpretation when the subject is no longer alive, while the present perfect is infelicitous:
 - (i) # Columbus has found America.
 - (ii) # Gutenberg has discovered the art of printing. (McCoard 1978)

(13) Columbus **tau** nemok-no Amerika. **JAV**
Columbus TAU AV.find-APPL Amerika
'Columbus found America.'
(*Columbus 1451-1506*)

(14) **in-**lawn ni krunpu' qu giqas na rhzyal krahu'. **ATL**
IN-find.PV ERG Columbus ABS new GEN land big
'Columbus found America (lit. the new big land).'

No current relevance

- The use of *tau/-in-* is **incompatible** with current relevance, a property opposite to that of the perfect:
 - (i) Sorry, I've eaten 10 minutes ago.

(15) Context: *Your friend asks if you want to eat at Bu Maula's. You finished eating 10 minutes ago. You say:*

Sepura-ne, aku { # **tau** / ✓wes } mangan.
sorry-DEF 1SG TAU already AV.eat
'Sorry, I've eaten.'

JAV

(16) Context: *You hear that Tali' is asking people for some bamboo, and you intend to offer him some.*

{# t<n>utu'=maku' / ✓wal=maku' tt-un} shera'
chop<IN.PV>=1S.ERG / PRF=1S.ERG chop-PV yesterday
qu mpuw msyaw ruma' qasa.
ABS ten rest bamboo that

ATL

'I chopped more than ten pieces of bamboo yesterday.'

No definite past time adverbial restriction

- The use of **tau/-in-** is **compatible** with definite past time adverbs, unlike the perfect:

(i) # I have eaten crab two days ago.

- (17) a. Aku **tau** mangan rajungan **se-taun** **keprungkor.** **JAV**
 1SG TAU AV.eat crab one -year ago
 'I ate crab 1 year ago.'
- b. Aku **tau** mangan rajungan **wingi** **wingi-nan-e.**
 1SG TAU AV.eat crab yesterday yesterday-NMLZ-DEF
 'I ate crab 2 days ago.'
- (18) a. m-<**in**>thtoq **sraral** uzi Kawas. **ATL**
 AV-<IN>bald before also Kawas
 'Kawas was also bald before.' (Atayal APC dictionary)
- b. t<m><**n**>ubun **sa** **qutux** **spung** qu Tali'.
 doze<AV><IN> LOC one o'clock ABS Tali'
 'Tali' dozed off at one o'clock.'

Interim summary I

- Does this 'category' behave like a perfect in other ways?
→ *Nothing resembles a 'perfect' except the experiential reading.*

	<i>have</i>	<i>tau/-in-</i>
Experiential reading	✓	✓
Resultative reading	✓	x
Universal perfect reading	✓	x
Anteriority (ET < RT)	✓	x
Lifetime effect	✓	x
Current relevance	✓	x
Past-time adverbial restriction	✓	x

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Not an aspect

Prediction 1.

- If *tau*/*-in-* were a perfect or a perfective, which denotes a relation between ET and RT,
→ *these markers would be possible with any reference time.*

- (19) a. I had/have/will have eaten crab.
b. I ate/will eat crab.

Not an aspect

Prediction 1 not borne out:

- *tau/-in-* are restricted to a past reference time

➤ Not compatible with present/future time adverbs:

- (20) Aku **tau** mangan rajungan wingi / # saiki / # sesok. JAV
1SG TAU AV.eat crab yesterday/ # now / # tomorrow
'I ate crab yesterday.' / ≠ 'I am eating crab now' / ≠ 'I will be eating crab tomorrow.'
- (21) m-<in>qwalax ssawni' / # misuw / # kira'. ATL
AV-<IN>rain early.today / # now / # later.today
'It rained earlier.' / ≠ 'It is raining.' / ≠ 'It will rain later.'

Not an aspect

Prediction 1 not borne out:

- *tau/-in-* are restricted to a past reference time

➤ Future/prospective marking under *tau* yields a counterfactual reading, rather than a future perfect/perfective reading.

(22) Putri **tau** **ape** ketemu Justin Bieber. **JAV**

Putri TAU PROSP meet Justin Bieber

'Putri would have met Justin Bieber.'

Comment: 'It didn't happen – the tickets were sold out.'

➤ Future marking cannot co-occur with *-in-*.

(23) * { p-<**in**>qwalax / **musa'** m-<**in**>qwalax } kayal=nya'. **ATL**

FUT.AV-<IN>rain FUT AV-<IN>rain sky=3S.GEN

Intended for 'It will rain.'

Not a perfective

Prediction 2.

- If *tau*/*-in-* are standard perfectives, where $ET \subseteq RT$
→ *expect culmination entailment*

(24) a. I wrote the letter, #*but I didn't finish it.*

b. We built a house last year, #*but we didn't finish it.*

Not a perfective

Prediction 2 not borne out:

- Accomplishment events marked by *tau/-in-* **do not entail culmination.**

- (25) Aku **tau** nules surat, **tapi** **durung** **mari.** **JAV**
1SG TAU AV.write letter but not.yet finish
'I wrote a letter, but I didn't finish.'
- (26) k<**in**>balay=nya' sa qutux kawas **ATL**
make<IN.PV>=3S.ERG LOC one year
ru **nyux=nya'** **ini'** **suq-iy** **na'.**
CONJ. PROG.PROX=3S.ERG NEG finish-LV yet
'He built the house last year but he hasn't finished yet.'

Not a perfective

Prediction 3.

- If *tau*/*-in-* are perfectives,
 - *expect narrative progression*
(a temporal sequence interpretation of events in texts):

(27) Fred got up at 5 a.m.. He took a long shower.

Not a perfective

Prediction 3 not borne out:

→ *tau/-in-* have no narrative use.

(28) Context: *You are describing what happened yesterday.*

JAV

Siti melbu kantor. De'e (# tau) ngopi.

Siti enter office 3SG TAU AV.coffee

'Siti came to the office. She drank coffee.'

(29) Context: *You are describing how Tali' acted when he came home.*

ATL

m-zyup blihun qu Tali' ru m-<(# in)>tama'.

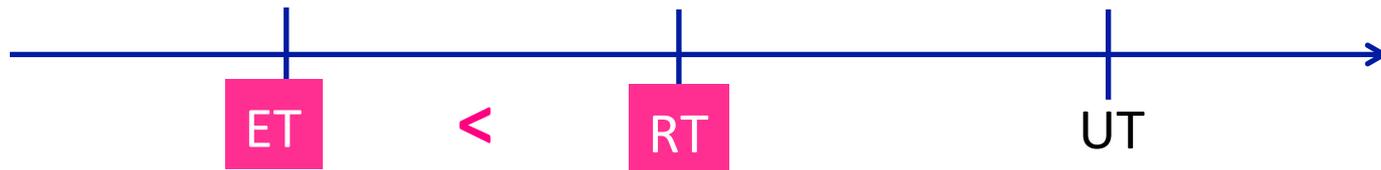
AV-enter door ABS Tali' CONJ. AV-<IN>sit

'Tali' came in and he sat down.'

Not an anterior/perfect

Prediction 4.

- If *tau/-in-* are a perfect, where $ET < RT$
→ expect that a past perfect reading is possible:



Prediction 4 is not borne out:

- We showed earlier that *tau/-in-* cannot denote this reading.

Not an experiential perfect

Prediction 5.

- If *tau*/*-in-* are exclusively experiential perfect markers
 - *expect no modification by an adverbial referring to a specific time in the past*

(30) a. I have climbed Mount Merapi.

b. I (# have) climbed Mount Merapi last month.

Not an experiential perfect

Prediction 5 not borne out:

- Recall that *tau/-in-* can be modified by past time adverbs.
→ *These readings are not experiential but **existential**.*

(31) Adik-ku **tau** lungo neng Indonesia september 2015. **JAV**
sibling-my TAU go to Indonesia September 2015
'My younger sibling went to Indonesia in September 2015.'

(32) Context: *You are surprised that your new friend cannot recognize you after you saw each other yesterday:*

aw'=saku' k<in>t-an shira' rwa? **ATL**
aw'=1S.ABS see<IN>-LV yesterday PRT
'Didn't you see me yesterday?'

Interim summary II

- Does this 'category' behave like an aspect?
→ No, *tau/-in-* do not behave like any aspect.

<i>Potential aspectual properties</i>		<i>tau/-in-</i>
Aspect	Unrestricted RT	no
Perfect (ET < RT)	Anterior reading	no
Perfective (ET \subseteq RT)	Culmination	no
	Narrative progression	no
Experiential perfect	Experiential reading only	no

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A quantificational past tense

- We've shown that *tau/-in-* only overlap in their use with the English perfect in experiential readings, and they don't behave like an aspect.
- We've argued that 'experiential' readings of *tau/-in-* are better described as **existential readings**.
- We propose that the semantics of *tau/-in-* involves an **existential quantifier over past times** (cf. Ogihara 1996, von Stechow 1995, Mucha 2016).

A quantificational past tense

$$[[tau/-in-]]^{g,c} = \lambda P_{\langle i,st \rangle} \lambda t \lambda w \exists t' [t' < t \ \& \ P(t')(w)]$$

- The marker *tau/-in-* denotes a function that takes a property of times P , a time t , and world w , and asserts that there is a time t' preceding t at which P holds in w .
- As with nominal quantifiers, whose domain is contextually restricted, we assume that the time t' is true of a contextually determined property of times C (cf. von Stechow 2009).

$$[[tau/-in-]]^{g,c} = \lambda C_{\langle i,st \rangle} \lambda P_{\langle i,st \rangle} \lambda t \lambda w \exists t' [t' < t \ \& \ C(t') \ \& \ P(t')(w)]$$

- The time t is usually the utterance time, or some perspective time.

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Not a referential past tense

If **tau**/*-in-* are a referential past tense,
→ *expect reference to an already established RT in the context*

Prediction not borne out:

Context: *Driving on the highway after leaving the house, you realize that you didn't turn off the stove (from Partee 1973):*

(33) aku kok rung (# tau) mate-ni kompor ya!
1SG PRT not.yet TAU AV.die-APPL stove yes
'I didn't turn off the stove!'

JAV

(34) # iyat=maku' n-uyut gasu'.
NEG=1S.ERG IN.PV-put.off gas
Intended: 'I didn't turn off the gas.'

✓ ini'=maku' yut-i gasu'.
NEG=1S.ERG put.off-PV gas
'I didn't turn off the gas.'

ATL

Not a referential past tense

If **tau/-in-** are a referential past tense,
→ *expect narrative progression to be possible*

Prediction not borne out:

Recall that **tau/-in-** do not advance a narrative.

(35) Context: *You are describing what happened yesterday.*

Siti melbu kantor. De'ke (# **tau**) ngopi.

Siti enter office 3SG TAU AV.coffee

'Siti came to the office. She drank coffee.'

JAV

(36) Context: *You are describing how Tali' acted when he came home.*

m-zyup blihun qu Tali' ru m-<(# **in**)>tama'.

AV-enter door ABS Tali' CONJ. AV-<IN>sit

'Tali' came in, and he sat down.'

ATL

Not a referential past tense

If **tau/-in-** are a referential past tense,
→ expect no scopal interaction with negation (cf. Partee 1973 for English)

Prediction not borne out:

NEG > **tau/-in-**

(37) wong londo **gak** **tau** mangan sego. **JAV**
person foreigner NEG TAU AV.eat rice
'White people have never eaten rice.' $\neg \exists t$ [t < UT & [whites eat rice at t]]

(38) **iyat**=saku' m-<**in**>hikang. **ATL**
NEG=1S.ABS AV-<AV>slim
'I have never been slim.' $\neg \exists t$ [t < UT & [I be slim at t]]

tau > **NEG** (NB: Atayal **-in-** is always in the scope of the negation *iyat*)

(39) Context: *Wanan eats rice every day. But maybe he hasn't eaten rice once or twice.*
Pak Wanan **tau** **gak** mangan sego. **JAV**
Mr. Wanan TAU NEG AV.eat rice
'Pak Wanan has not eaten rice before.' $\exists t$ [t < UT & \neg [Wanan eat rice at t]]

Summary

- The markers *tau/-in-* have **no** referential uses:

<i>Properties of referential past tense</i>	<i>tau/-in-</i>
Temporal anaphor	no
Narrative progression	no
Referential reading with negation	no

- Supports that the semantics of *tau/-in-* is quantificational in nature.

Explaining the data

$$[[tau/-in-]]^{g,c} = \lambda C_{\langle i,st \rangle} \lambda P_{\langle i,st \rangle} \lambda t \lambda w \exists t' [t' < t \ \& \ C(t') \ \& \ P(t')(w)]$$

- **Past RT restriction, no aspectual reading**

Since *tau/-in-* are past tense markers, they are restricted to a past RT, and they do not impose a relation between ET and RT, typically responsible for various aspectual readings.

- **No 'lifetime' effect, no current relevance**

Given a past tense analysis, we do not expect these properties for *tau/-in-*.

- **No universal perfect reading**

This is expected given that *tau/-in-* denote an existential quantifier.

- **No resultative reading**

The analysis makes no reference to the result state of the relevant event; it only asserts that there was a time when P is satisfied.

Explaining the data

$$[[tau/-in-]]^{g,c} = \lambda C_{\langle i, st \rangle} \lambda P_{\langle i, st \rangle} \lambda t \lambda w \exists t' [t' < t \ \& \ C(t') \ \& \ P(t')(w)]$$

- **Scope interactions with negation**

This is expected given that *tau/-in-* encode an existential quantifier.

- **Experiential reading**

Without context or temporal modification, the default quantifying domain of *tau/-in-* is a longer interval, hence giving rise to an experiential reading.

- **Adverbial modification**

With a salient RT (given by time adverb or context), the quantifying domain is restricted to that RT interval, and thus *tau/-in-* only yield an existential reading.

- **No referential/anaphoric uses**

With a very short RT interval, the reading of *tau/-in-* is closer to, but still not equivalent to, a referential one.

Concluding remarks

- Despite a dominant experiential perfect reading, the Javanese *tau* and Atayal *-in-* are not aspectual markers but best analyzed as a quantificational past tense.
- Our findings have implications for the cross-linguistic study of ‘experiential’ markers in related and unrelated languages.
 - Indonesian *pernah* ‘once, ever’
 - Reflexes of the PAN **-in-* in Philippine languages and many other Formosan languages.
 - Mandarin *-guo*
- The markers *tau/-in-* being unambiguously quantificational suggest that the semantics of tense varies across languages, and the two prevalent approaches to past tense do not necessarily compete.

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