

Lexical aspect and the stative present in Kanien'kéha

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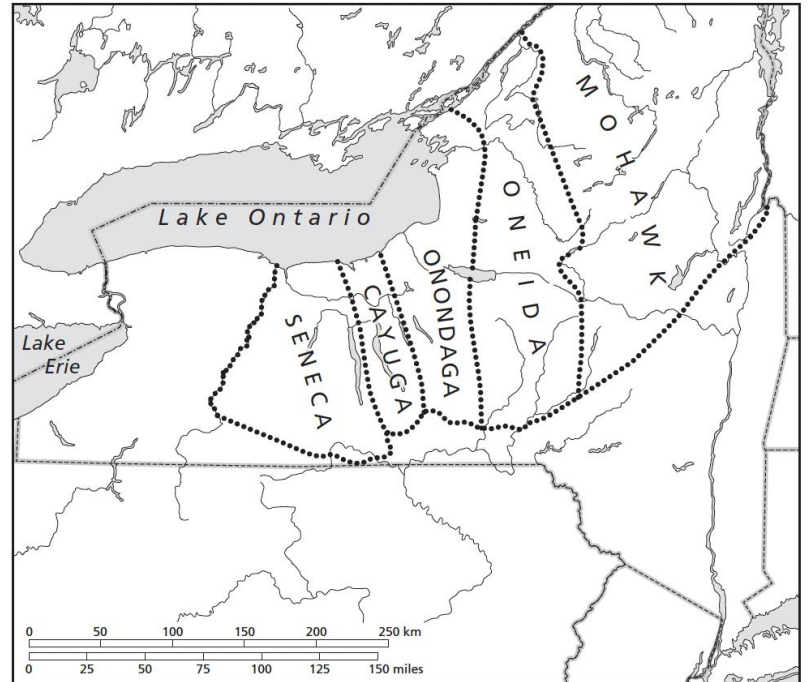
Tetewatatenawà:se

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Linguistics (MULL) lab

McGill Syntax Semantics Reading Group

Kanien'kéha

- Kanien'kéha is a Northern Iroquoian language, traditionally spoken by the Kanien'kehá:ka in upstate New York and southern Quebec.
- The Kanien'kehá:ka now live in upstate New York, southern Quebec, and southern Ontario.
- Kanien'kéha has around 566 L1 speakers, with about a hundred other speakers (L2 and "new" L1; DeCaire, forthcoming).



Iroquois five nations. © Canadian Encyclopedia (reproduced by David Cox for Cambridge University Press)

1. Introducing the puzzle

3 aspects

- There is a three-way Aspectual contrast in Kanien'kéha:
 1. **Habitual** (~ imperfective)
 - K-ateweiénst-**ha'**.
1sgS-study-**HAB**
'I study.'
 2. **Punctual** (~ perfective)
 - Wa'-k-atéweienst-**e'**.
FAC-1sgS-study-**PUNC**
'I did study.'
 3. **Stative** (~ perfect)
 - Wak-ateweiénst-**on**.
1sgO-study-**STAT**
'I have studied.'

How to express present?

- There is no dedicated form for the present tense (potentially, no true tense at all!).

Habitual Present

4. Ó:nenhste t-iénth-o-s.
corn 1sgS-plant-EP-HAB
'I plant corn.' OR
'I am planting corn.'

Stative Present

5. Wak-atshókw-en.
1sgO-smoke-STAT
'I have smoked.' OR
'I am smoking.'

(We will translate this throughout using the English progressive)

Habitual vs Stative Present

- The two readings are in complementary distribution: verbs can take one or the other.

Habitual Present Verbs

6. Ó:nenhste t-iénth-o-s.
corn 1sgS-plant-EP-HAB
'I plant corn.' OR
'I am planting corn.'
7. Ó:nenhste wat-iénth-on.
corn 1sgO-plant-STAT
Can only mean: 'I have planted corn.'

Stative Present Verbs

8. K-atshókwa-s.
1sgS-smoke-HAB
Can only mean: 'I smoke.'
9. Wak-atshókw-en.
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Puzzle

- Having a Present reading with Habitual is not surprising; cross-linguistically, imperfectives can often have a present reading (Dahl & Velupillai, 2013)
- But why do some verbs have a Present reading with the Stative which is otherwise thought of as a Perfect?
 - resulting state of doing X vs. current state of doing X

Stative Present

Wak-atshókw-en.
1sgO-smoke-STAT
'I have smoked.' OR
'I am smoking.'

Project Goals

1. Theoretical – how and why does STAT Present occur?
2. Pedagogical – how can learners better know which verbs use which Present form?

Chafe & ‘Consequentiality’

- Chafe (1980) observes similar patterns for the present reading in related Seneca and Onondaga.
- He proposes that the interpretation of stative forms depends on the “**consequentiality**” of the verb.
- Consequentiality is defined as a “potentiality of present and perceptible states, such as those that would result from pounding or planting corn, from burning, and the like”
 - “consequential verbs” use the **habitual form** for present readings
 - “nonconsequential verbs” use the **stative form** for present reading

Challenges for Learners

- How to determine which verbs use which suffix for present reading?
 - Lots of memorization!
 - No clear rules...
- What is the connection between Perfect and Present meaning for these verbs?

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
-atawen-	swim	-onni-	make
-te-ia'toreht-	judge	-atshennonni-	get happy
-rakw-	choose	-ateriio-	fight
-atorat-	hunt	-te-ahsaro-	clap
-ateweienhst-	study	-wennahnot-	read

Roadmap

1. Introducing the puzzle (done!)
2. Proposal
3. Predictions
4. Applications to Pedagogy

2. Proposal

Proposal

- Baker & Travis (1998) note that “consequential” verbs line up with **telic verbs**.

Telic verbs → *Habitual Present*
(e.g. *endpoint; Accomplishment:*
-iénth- ‘plant corn’)

Atelic verbs → *Stative Present*
(e.g. *no endpoint; Activity:*
-atshókwa- ‘smoke’)

- In a similar line, we propose that the distinction crucial for the Present reading patterns in Kanien’kéha is dependent on whether the verb denotes an event with an **endpoint** or not.

Proposal

- The event structure of atelic verbs allows for the Stative suffix to derive both perfect and present meaning.
- The event structure of telic verbs only allows the Stative suffix to derive the perfect reading, which forces speakers to use the Habitual form to express present instead.

Event structure

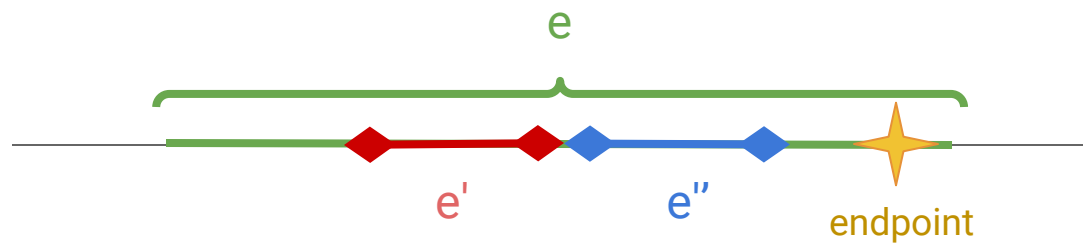
Accomplishment
(Non-homogenous events)



-iénth- '*plant corn*'

Event structure

Accomplishment
(Non-homogenous events)



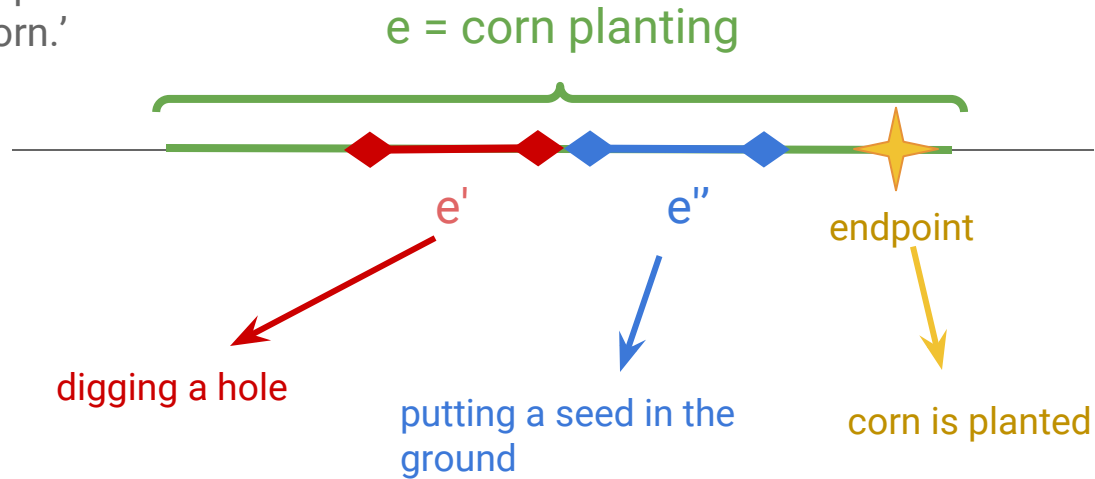
-iénth- '*plant corn*'

Event structure

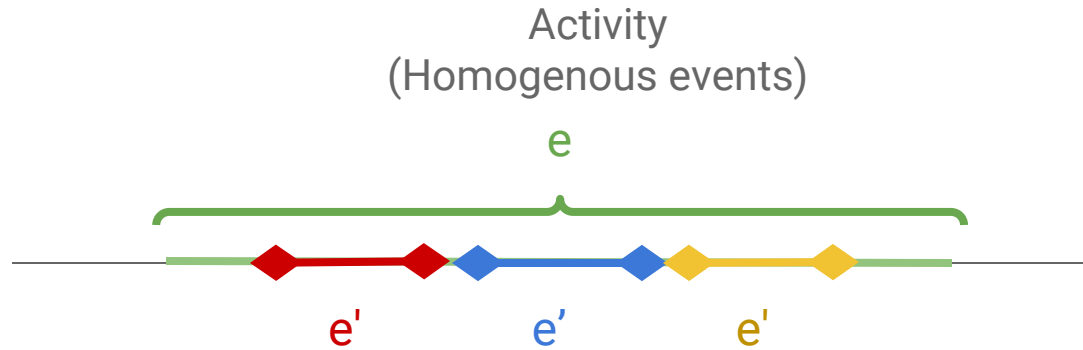
Ó:nenhste t-iénth-o-s.

corn 1sgS-plant-EP-HAB

'I am planting corn.'



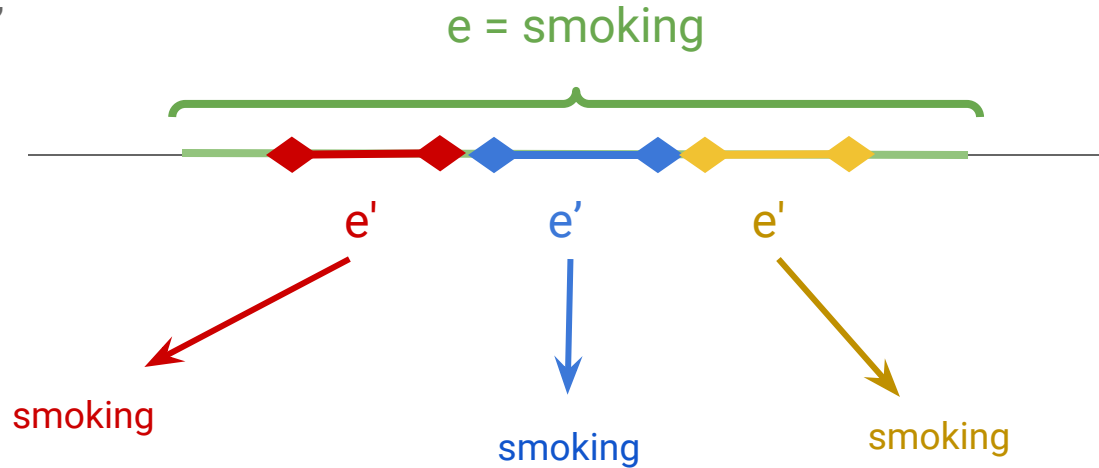
Event structure



-atshókwa- 'smoke'

Event structure

Wak-atshókw-en.
1sgO-smoke-STAT
'I am smoking.'



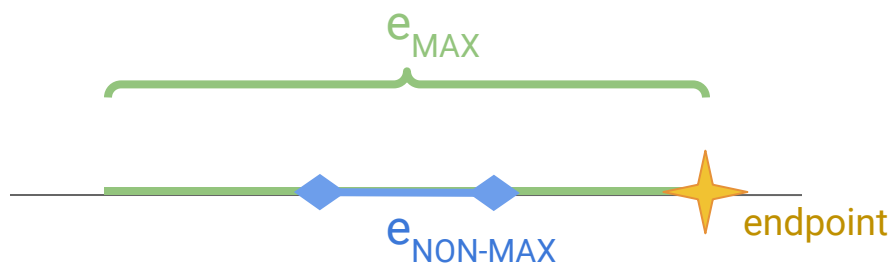
The Stative suffix is a...

- Following Altshuler (2014), we propose that the stative in Kanien'kéha imposes a 'maximal stage requirement'.
- A subevent is **maximal** when there is no larger event that also satisfies the eventuality description

The Stative suffix is a...

- The Stative suffix then takes a **maximal subevent** and asserts that it holds in the present
 - **Accomplishments** are only maximal when they have **culminated** at their endpoint
 - **Activities** are homogenous, so any arbitrary subevent counts as maximal

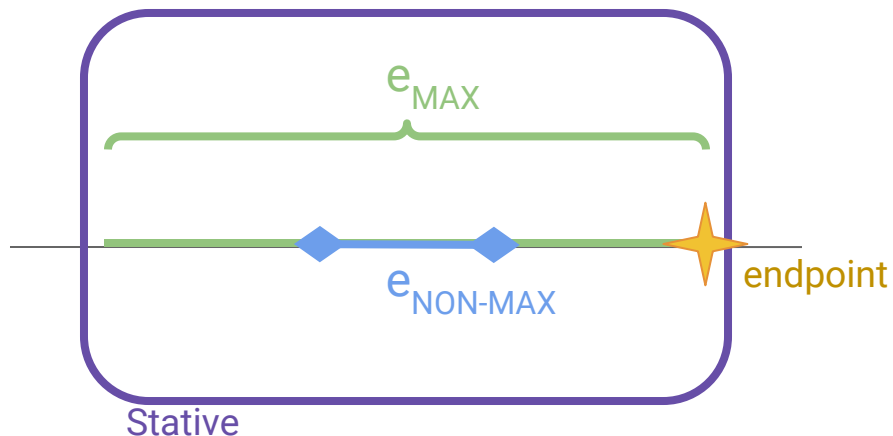
Deriving the Habitual Present



Habitual Present

10. Ó:nenhste wat-íenth-on.
corn 1sg0-plant-STAT
Can only mean: 'I have planted corn.'

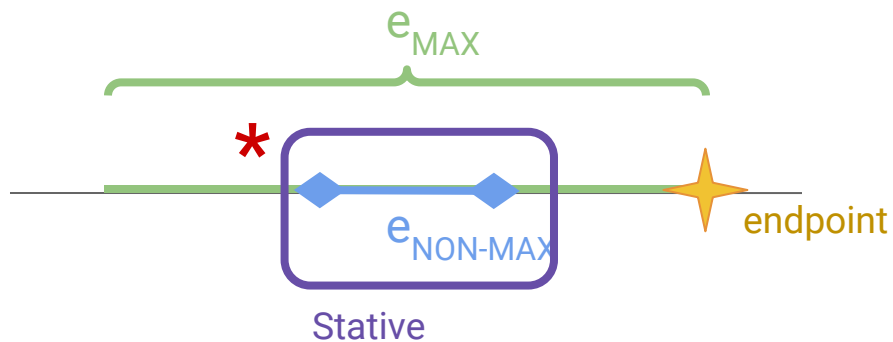
Deriving the Habitual Present



Stative can apply to the whole telic event, as it is the maximal event.

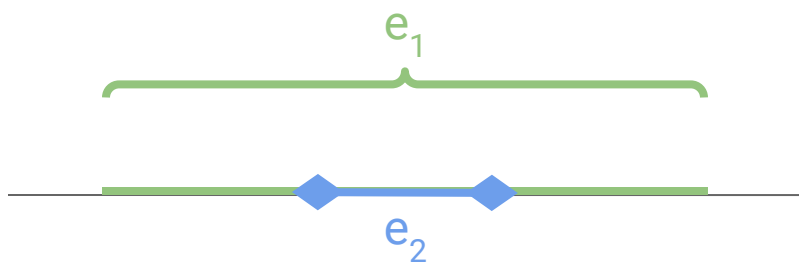
As there is only one maximal event and it is deemed to be finished, we understand that this event is not going on any longer.

Deriving the Habitual Present



Stative cannot take any subevents of a telic even as all subevents will be non-maximal since they cannot include the endpoint.

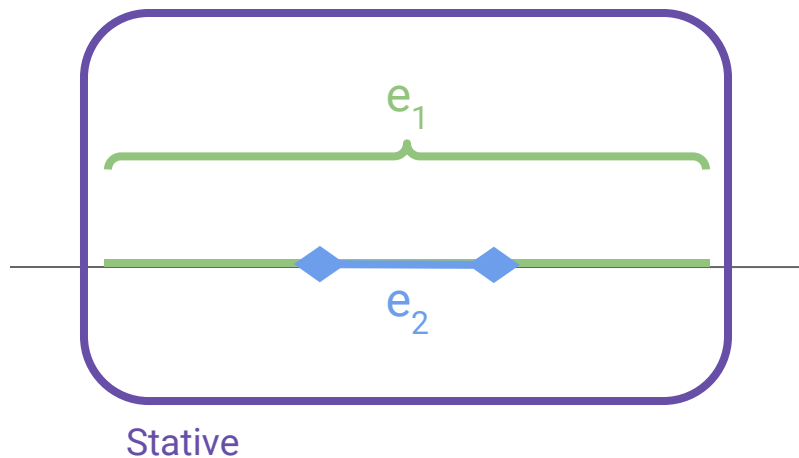
Deriving the Stative Present



Stative Present

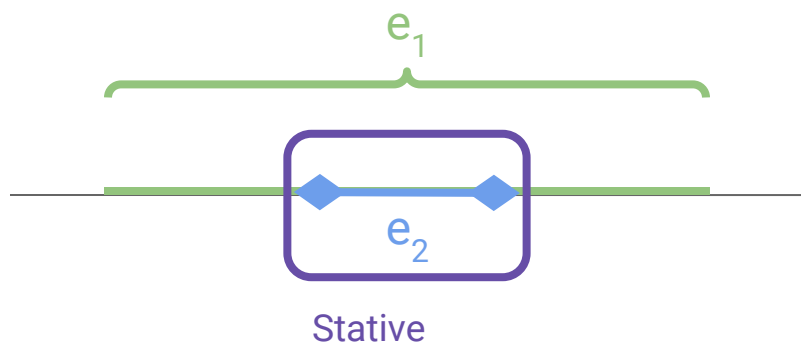
11. Wak-atshókw-en.
1sg0-smoke-STAT
'I have smoked.' OR
'I am smoking.'

Deriving the Stative Present



With the homogenous predicates, the stative can apply to the whole event, as it is a maximal event.

Deriving the Stative Present



Stative can **also** apply to subevents, as all subevents of a homogenous event are maximal events.

We propose that in this case, the present reading arises pragmatically. If the only a subevent is finished at the reference point, but there are other subevents following it, we derive that the full event is unfolding in the present moment.

3. Predictions

Predictions of proposal

- Verbs with different event structures interact with Aspect in different ways.
- The entire verbal complex that the stative selects contributes to the event structure.
- **Prediction**: processes which add or remove an endpoint to a verb will change the availability of a verb's Present reading with HAB/STAT.
 - Causative suffixes
 - Noun incorporation

Causative suffix

- According to the proposal, all verbs with an endpoint will use the Habitual suffix to express Present.
- Causativity has an endpoint.



'I see the problem.'



'I cause the problem.'

- **Prediction**: causativized verbs should all be HAB Present!

Causative suffix

- 'Fall' is a Stative Present verb.

12. Te-wà':sen-'-s.

CIS-3nS-fall-INCH-HAB

'It falls (everyday).

Cannot mean: 'It's falling right now.'

13. T-io-'sèn:'-en.

CIS-3nO-fall-INCH-STAT

'It has fallen.'

14. Ta-io-'sen-(en)-hátie.

CIS-3nO-fall-(STAT)-PROG

'It's falling right now.'

e=falling

Causative suffix

- But when you add the causative suffix...it becomes Habitual Present.

15. T-ka-'sén-ht-**ha**'
CIS-1s>3n-fall-CAUS-**HAB**
'I make it fall all the time.'
'I'm lowering it (right now).'

16. Te-wak-a-'sén-ht-**on**.
CIS-1s>3n-EP-fall-CAUS-**STAT**
'I have lowered it.'
Cannot mean: 'I am lowering it (right now).'

Endpoint
of causing



e_1 =CAUS

e_2 =falling

Causative suffix

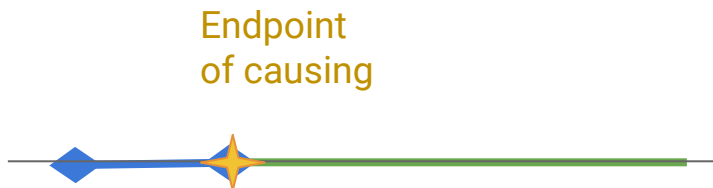
No Habitual Present + **CAUS** → **Habitual Present**

17. Te-wà:-sen-'s.
CIS-3nS-fall-INCH-HAB
'It falls (everyday).'
Cannot mean: 'It's falling right now.'

18. T-ka-'sén-ht-ha'.
CIS-1sg>3n-fall-CAUS-HAB
'I make it fall all the time.'
'I'm lowering it (right now).'



e=falling



e₁=CAUS

e₂=falling

Noun Incorporation

- **Prediction**: noun incorporation might also change event structure.
- We have found one verb where this is true: EAT

Unincorporated object

19. Káhi í:k-e-k-s.
Fruit EP-1sgS-EP-eat-HAB
'I eat fruit/I am eating fruit.'

20. Káhi wak-é:-k-on.
Fruit 1sgO-EP-eat-STAT
'I have eaten fruit'

Incorporated object

21. K-à:i-a-k-s.
1sgS-fruit-LK-eat-HAB
'I eat fruit./I am a fruit eater.'

22. Wak-ahi-á:-k-on.
1sgO-fruit-LK-eat-STAT
'I am eating fruit/I have eaten fruit.'

Noun Incorporation

- When an object is incorporated, a typically HAB Present verb is interpreted as a STAT Present.

Unincorporated object

19. Káhi í:-k-e-k-s.
Fruit EP-1sgS-EP-eat-HAB
'I eat fruit/I am eating fruit.'
20. Káhi wak-é:-k-on.
Fruit 1sgO-EP-eat-STAT
'I have eaten fruit'

Incorporated object

21. K-à:i-a-k-s.
1sgS-fruit-LK-eat-HAB
'I eat fruit./I am a fruit eater.'
22. Wak-ahi-á:-k-on.
1sgO-fruit-LK-eat-STAT
'I am eating **fruit**/I have eaten fruit.'

Noun Incorporation

- This is potentially unsurprising: cross-linguistically, the nature of the object has an effect on telicity.
 - For atelicizing effect of unspecified objects → Dowty 1979.
- Outstanding puzzle: why only EAT?
- Additional evidence for semantic effects of noun incorporation → DeCaire et al. 2017.

4. Applications to teaching

Potential applications 1: verb meaning

- Which verbs end up with which present, don't always seem to follow the 'endpoint' rule.
- **Understanding the meaning of the Kanien'kéha word**, and not relying on translations into English, can help understand the pattern better.

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
-atawen-	swim	-onni-	make
-te-ia'toreht-	judge	-atshennonni-	get happy
-rakw-	choose	-ateriio-	fight
-atorat-	hunt	-te-ahsaro-	clap
-ateweienhst-	study	-wennahnot-	read

Understanding complex verbs

- In English, 'swim' doesn't have an endpoint.
- So why is it Habitual Present in Kanien'kéha?

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
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Understanding complex verbs

- Understanding the root better helps us explain.

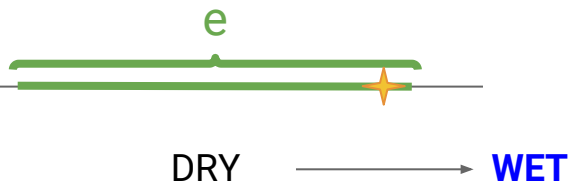
23. -at-awen
SRFL-water
'swim/bathe'
'immerse in water' (archaic)

24. Awén-ke
water-LOC
'in the water'

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
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Understanding complex verbs

- 'get into water' has a clear endpoint → the moment you are finally in the water!



Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
-atawen-	swim	-onni-	make
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Potential applications 2: suffix rules

- But...learners don't always know the historical meaning of a verb.
- Finding **predictable patterns** helps make **rules** for classifying verbs into Habitual Present vs. Stative Present verbs.

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
-atawen-	swim	-onni-	make
-te-ia'toreht-	judge	-atshennonni-	get happy
-rakw-	choose	-ateriio-	fight
-atorat-	hunt	-te-ahsaro-	clap
-ateweienhst-	study	-wennahnot-	read

Causative suffixes

- 'judge' and 'study' seem like they have no endpoint in English.
- But we see a causative suffix here, which always derives Habitual Present verbs in the examples we have seen.

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
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-atorat-	hunt	-te-ahsaro-	clap
-ateweierhst-	study	-wennahnot-	read

Causative suffixes

- -ateweienhst- literally means 'to cause the ability/skill'

25. ate-weien-hst
SRFL-ability/skill-CAUS

- ability = no endpoint
- CAUSE an ability/skill = endpoint

Habitual Present		Stative Present	
-ientho-	plant	-atshokw-	smoke
-hninon-	buy	-hnekihr-	drink
-atawen-	swim	-onni-	make
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-rakw-	choose	-ateriio-	fight
-atorat-	hunt	-te-ahsaro-	clap
-ateweierhst-	study	-wennahnot-	read

Other potential suffix rules

- Some suffixes lead to **predictable class membership**
- Adding onto the verb root can change the aspectual class in predictable ways:
 - Causative → HAB Present
 - Benefactive → STAT Present
 - -on:ni- → STAT Present
 - ...

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Appendix: Areas of Future Research

1. Finding a diagnostic - is there a test (like 'in a minute/for a minute' in English) which can help us independently confirm which verbs are in which class?
2. Confirming the suffix rules - are there any exceptions?
3. Expanding the list of rules - what other verbal affixes can help us predict which Aspect to use for Present?
4. Noun incorporation - do any other verbs act like *eat*?

Appendix: Formal representations

(i) $\llbracket \text{STAT} \rrbracket = \lambda w \lambda t \lambda P. \exists e [\tau(e) \subseteq t \wedge e \in w \wedge \text{MAX}(w, e, P)]$

(ii) $\text{MAX}(w, e, P) = 1$ iff $P(e) \wedge \forall e' \in w [(P(e') \wedge e \subseteq e') \rightarrow e' = e]$

Adopted from Nadathur & Filip, (2021)

Activities (homogenous) $\forall e' \subseteq e \wedge P(e) \rightarrow P(e') = 1$

Accomplishments
(non-homogenous) $\neg \forall e' \subseteq e \wedge P(e) \rightarrow P(e') = 1$

2. Past analyses

Issues with Chafe's proposal

- Crucially, Chafe (1980) claims that for non-consequential (stative present) verbs, the **usual perfect reading is unavailable** in the stative

10. ho-skátkwěʔ-õh

3sS-laugh-STAT

'He is laughing.'

Cannot mean: 'He laughed.'

(Seneca, Chafe 1980, p.45)

Issues with Chafe's proposal

- In Kanien'kéha, however, the perfect reading is always available, and is in fact obligatory in some contexts, such as with the adverbial ó:nen 'already'.

11. Te-wak-at-skà:nh-on

DUPL-1sO-SRFL-eat-STAT

1. 'I am eating'

2. 'I have eaten'

(KOR Verb Morphology, p 67)


12. Ó:nen te-wak-at-skà:nh-on

already DUPL-1sO-SRFL-eat-STAT

'I have already eaten'

#'I am already eating'

Revising Chafe's paradigm for Kanien'kéha

	Habitual form	Stative form
consequential	habitual present	perfect
non-consequential	habitual	perfect present  Is not predicted by Chafe!

Conclusion

- In Kanien'kéha, the availability of present readings with the Stative can be explained by differences in the event structure of verbs, specifically their telicity.
- An approach like this helps explain why verbs differ in the form they take to express the present and why changes to the verb (suffixes, noun incorporation) also affect this.
- These findings can help learners better understand which Aspect to use for new verbs.

Change-of-state verbs

- Many verbs that denote emotional or physical states appear with the stative to express a present reading.

() Wakatshennón:ni. (STAT)
'I am happy.'

- This makes it seem as though these are event-structurally simple → STAT present.

Change-of-state verbs

- However, when we put these verbs in habitual, we get a change-of-state reading.

() Katshennón:nis. (HAB)
'I get happy.'

- The stative construction is being interpreted as a perfect.
 - 'I am happy' → 'I am in the state of having been made happy'

Future work

- No counterexamples found, but we are looking for independent diagnostics for telicity that can be used in Kanien'kéha
-

- [-onni:- (always stv pres)] [stv]
- -awi- (always stv pres)
- Caus (always hab pres) [adding process before]
- Inch (hab pres)
-

Diagnostics

(stop) reading

(finish) reading

Sateri'sa

“Let it go for a little while”

“I stopped reading”

-wennahnot-a-kw-

(read-EP-REV)

“I finished praying”

katerennaiéntá-kwa-s (STV pres)

“I pray”

katerén:aiens (STV pres)

I give thanks

tekatonhwerá:tons (STV pres)

I finish giving thanks

tekatonhwaratón-hsions

BUT: “I finish washing it”

KenoharéhSIONS

“I'm washing it rn”

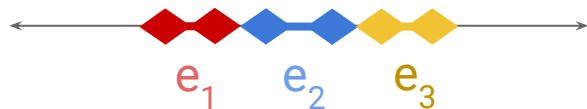
Kenoharés

(HAB pres)

Proposal

Central claim: Habitual Present verbs are event structurally complex, including both the *process subeventuality* and a *resulting state subeventuality*.

Stative Present



Habitual Present



Homogenous events

Chafe & 'Consequentiality'

	generic	present	perfect
consequential	habitual	habitual	stative
non-consequential	habitual	stative	—