The repetitive prefix and argumentless presupposition in Kanien'kéha

Willie Myers

McGill University willie.myers@mail.mcgill.ca

SULA 13 Universidade Federal de Santa Catarina October 31, 2024

Background

The adverb 'again' has often been used to make claims about syntactic complexity and verbal semantics.

(Morgan 1969, McCawley 1976, von Stechow 1996, Beck and Johnson 2004, Bale 2007, Smith and Yu 2021)

Under a structural analysis of 'again' as an event modifier, the range of presuppositions it triggers correlates with the range of adjunction sites in the syntax that denote properties of events.

Two possible readings with 'again'

- (1) Declarative presupposition
 - a. Co-text: Seymour's dryer broke. To fix it, he hit the dryer but it didn't turn on. So...
 - b. [Seymour hit the dryer] again.
- (2) Subjectless presupposition
 - a. Co-text: Seymour's dryer broke. He called a repairwoman who simply hit the dryer until it started working. The dryer broke down two days later. So...
 - b. <u>Seymour</u> [hit the dryer] again. (Bale 2007, 464)

An impossible reading

- (3) Objectless presupposition
 - a. Co-text: Seymour's dryer broke. He called a repairwoman who simply hit the dryer until it started working. Then, the washing machine broke. So...
 - b. #Seymour [hit] the washing machine again.

Past claims

The structural analysis has been used to support the claim that *external* arguments are syntactically severed from the verb but *internal* arguments are not.

(e.g., Kratzer 1996, Harley 2014)



Repetitive presuppositions in Kanien'kéha

Kanien'kéha (Northern Iroquoian) has two morphemes which have traditionally been equated with 'again'.

- The obligatory prefix *s*-
- The optional adverb *á:re'*
- (5) Katá:wens. (6) k-atawen-s
 1sgA-swim-HAB
 'I'm swimming.'
- (Á:re') skatá:wens. are' s-k-atawen-s again REP-1sgA-swim-HAB 'I'm swimming again.'

Repetitive presuppositions in Kanien'kéha

Like 'again', the repetitive form introduces a repetitive presupposition.

- Iah teske'serehtahní:nons.
 iah te-s-k-'sere-hta-hninon-s
 no NEG-REP-1sgA-car-NMLZ-buy-HAB
 'I am not buying a car again.'
 - ✓ Context: I bought a car last year.
 - ★ Context: I've never bought a car before.

Repetitive presuppositions in Kanien'kéha

In addition to the expected presuppositions of 'again', it also introduces a number of *unexpected* presuppositions, including **objectless presuppositions**.

- (8) Context: Yesterday, Paul went to his favorite restaurant. He didn't eat anything all day beforehand. At the restaurant...
 - a. É:ri wà:rake'. eri wa-ra-ek-' cherry FACT-MsgA-eat-PUNC He ate cherries.'
 - b. Sok kítkit saha'wà:rake'.
 sok kitkit s-wa'-ra-'wahr-a-ek-'
 then chicken REP-FACT-MsgA-meat-JR-eat-PUNC
 'Then he ate chicken.'
 Literally: 'Then he meat-ate chicken again.'

The puzzle

• How are such presuppositions possible in Kanien'kéha?

• In particular, how do we get objectless presuppositions which are unattested in other languages?

• What cross-linguistic consequences does the existence of such presuppositions pose?

Main claims

• Despite apparent differences, Kanien'kéha presuppositions can be explained via the same structural analysis proposed for 'again'.

(e.g., Dowty 1979; von Stechow 1996; Jäger and Blutner 2003; Beck and Johnson 2004, a.o.)

Main claims

• Despite apparent differences, Kanien'kéha presuppositions can be explained via the same structural analysis proposed for 'again'.

(e.g., Dowty 1979; von Stechow 1996; Jäger and Blutner 2003; Beck and Johnson 2004, a.o.)

- Kanien'kéha has a repetitive operator REP-Op which:
 - modifies a property of events, and
 - triggers a presupposition determined by its syntactic complement

Main claims

• Despite apparent differences, Kanien'kéha presuppositions can be explained via the same structural analysis proposed for 'again'.

(e.g., Dowty 1979; von Stechow 1996; Jäger and Blutner 2003; Beck and Johnson 2004, a.o.)

- Kanien'kéha has a repetitive operator REP-Op which:
 - modifies a property of events, and
 - triggers a presupposition determined by its syntactic complement
- The range of presuppositions available in Kanien'kéha indicates the range of possible adjunction sites for REP-Op.

Main consequences

- The existence of objectless presuppositions in Kanien'kéha suggests that there's an adjunction site between the verb and the object.
- This adjunction site must denote a property of events.
- How does this happen?

Main consequences

- The existence of objectless presuppositions in Kanien'kéha suggests that there's an adjunction site between the verb and the object.
- This adjunction site must denote a property of events.
- How does this happen?
 - $\rightarrow\,$ The internal argument is severed from the verb.

Outline

- **1** Background and proposal
- **2** Evidence for structural approach
- **3** Diagnosing syntactic complexity
- 4 Consequences
- **6** Conclusion

Outline

1 Background and proposal

- **2** Evidence for structural approach
- **③** Diagnosing syntactic complexity
- ④ Consequences
- **6** Conclusion

Kanien'kéha (aka Mohawk)



- spoken by ~600 people in Quebec, Ontario, and New York state (DeCaire 2023)
- majority of speakers are L1 Elders but growing number of fluent L2 speakers (Stacey 2016)
- polysynthetic with lots of verbal morphology
- Fieldwork since 2022 in collaboration with elders Mary McDonald, Katerí Deer, Konwaronhiá:wi Norton, and Warisó:se Bush

Two repetitive morphemes

- 1 *á:re*′ = free-standing 'adverb'
- 2 *s* = verbal prefix
 - (9) Á:re' skatá:wens.
 are' s-k-atawen-s
 again REP-1sgA-swim-HAB
 'I'm swimming again.'

\rightarrow Both are translated as 'again' in grammars

(Bonvillain 1973, Michelson et al. 2011, Martin 2023)

Same meaning, different distribution

s- can occur without <u>*á:re'*</u> but <u>*á:re'*</u> cannot occur without s-

(Á:re') *(s)akatáwen'.
 are' s-wa'-k-atawen-'
 again REP-FACT-1sgA-swim-PUNC
 'I swam again.'

 \rightarrow Co-occurrence doesn't force a double 'again' reading.

What is the syntax of the repetitive?

Proposal:

- *á:re*′ is overt realization of a repetitive operator
- *s* is a semantically vacuous concord marker
- The concord marker establishes a syntactic dependency with the operator
- Result: the prefix is realized any time the operator is present in a clause

(11) [REP-Operator [REP-Prefix [I swam]]] $\underline{\dot{a}:re' s-}$

(in the spirit of Lee 2005, Quek and Hirsch 2017, and Sun 2021 on, e.g., 'only' doubling)

Realizing the operator

In line with operator-particle analyses in other languages, the operator can also be null.

(12) Sakatáwen'.
 s-wa'-k-atáwen-'
 REP-FACT-1sgA-swim-PUNC
 'I swam again.'

What is the operator's semantic contribution?

As we saw in (7), it introduces a **repetitive** presupposition.

- (7') Iah teske'serehtahní:nons.
 iah te-s-k-'sere-hta-hninon-s
 no NEG-REP-1sgA-car-NMLZ-buy-HAB
 'I am not buying a car again.'
 - ✓ Context: I bought a car last year.
 - ★ Context: I've never bought a car before.

Presupposition

The speaker has bought a car before

Not an additive presupposition

Crucially, the presuppositions are repetitive, not additive.

- (13) Context: John is doing kickboxing with a punching bag.
 - a. Netontiétenhte' ká:iare' wahakòn:reke'.
 netontietenhte' kaiare' wa-ra-konrek-'
 at.first bag FACT-MsgA-punch-PUNC
 'First, he punched the bag.'
 - b. #Sok ká:iare' saharahséntho'.
 sok kaiare' s-wa'-ra-rahsentho-'
 then bag REP-FACT-MsgA-kick-PUNC
 Cannot mean: 'Then he kicked the bag.'
 - \rightarrow In contrast to language like Chinese and Korean which possess adverbs that give rise to both repetitive and additive presuppositions

Semantics of Kanien'kéha repetitive operator

Proposal:

- Kanien'kéha's REP-Op shares the same semantics as (repetitive) 'again'.
 - (14) $[\![REP-Op]]P(e) \text{ is defined iff } \exists e^1 \ [e^1 \prec e \ \& \ P(e^1)].$ When defined, $[\![REP-Op]]P(e) = P(e).$

(von Stechow 1996, Jäger and Blutner 2003, Beck and Johnson 2004, Bale 2007, and many others)

- Presuppositional scope from syntactic structure:
 - REP-Op can adjoin at any level of the derivation that denotes a set of events.
 - The resulting presupposition is determined by the content of the operator's syntactic complement.

Structural analysis of repetitive

(15) Deriving a declarative presupposition



→ Presupposes that an event of [Mary kicking the ball] happened before.

Outline

Background and proposal

2 Evidence for structural approach

③ Diagnosing syntactic complexity

④ Consequences

6 Conclusion

Evidence for syntax-sensitivity

Claim: Presuppositions introduced by REP-Op are sensitive to the syntax. Specifically, the content of REP-Op's presupposition is determined by its syntactic complement.

Evidence:

- 1 Scope effects with *á:re'* and adjuncts
- 2 Scope effects with overt vs. null *á:re*'

Scope effects with adverbial adjuncts in English

The adverbial adjunct is part of the presupposition only if it's contained in the complement of *again*.

- (16) Co-text: Two weeks ago, I met Esme on a Wednesday. At that time, we planned to meet the following week. So...
 - a. I met her again on a Tuesday. Syntax: ... [[[met her] again] on a Tuesday]
 - b. #I met her on a Tuesday again.
 Syntax: ... [[met her on a Tuesday] again]]

Scope effects with adverbial adjuncts in Kanien'kéha

(17) Context: Mary is a basket maker. She makes one basket each day. Yesterday she made a basket in the morning. Today...

> Á:re' [iotohétston néntie saion'therón:ni']. are' iotohetston nentie s-wa'-ie-a'ther-onni-' again in.the.afternoon REP-FACT-FI.A-basket-make-PUNC

- a. X '[She made a basket] again in the afternoon .'
- b. ✓ '[She made a basket in the afternoon] again.'

 \rightarrow If the adjunct comes after *á*:*re*', it must be in the presupposition.

Scope effects with adverbial adjuncts in Kanien'kéha

(18) Context: Mary is a basket maker. She makes one basket each day. Yesterday she made a basket in the morning. Today...

```
Iotohétston néntie <mark>á:re'</mark> [saion'therón:ni'].
iotohetston nentie are' s-wa'-ie-a'ther-onni-'
in.the.afternoon again REP-FACT-FI.A-basket-make-PUNC
```

- a. 🖌 '[She made a basket] again in the afternoon .'
- b. ★ '[She made a basket in the afternoon] again.'

 \rightarrow If the adjunct comes before *á:re*', it must not be in the presupposition.

á:re' and subjectless presuppositions

To look at scope effects with the realization of á:re', we turn to subjectless presuppositions.



→ Presupposes that an event of [kicking the ball] happened before.

Overt *á:re* forces declarative presuppositions

(20) Context: Mary kicked the ball. Then...

- a. #Á:re' Kó:r saharashéntho'.
 are' Kó:r s-wa'-ra-rashéntho-'.
 again Paul REP-FACT-MsgA-kick-PUNC
 Cannot mean: 'Paul [kicked it] again.'
 Can only mean: 'Again [Paul kicked it].'
- b. #Kó:r á:re' saharashéntho'.
 Kór are' s-wa'-ra-rashéntho-'.
 Paul again REP-FACT-MsgA-kick-PUNC
 Cannot mean: 'Paul [kicked it] again.'
 Can only mean: 'Again [Paul kicked it].'

Lower scope requires null *á:re'*

(21) Context: Mary kicked the ball. Then...

Kó:r saharashéntho'. Kór s-wa'-ra-rashéntho-'. Paul REP-FACT-MsgA-kick-PUNC

'Paul [kicked it] again.'

Lower scope requires null á:re'

(21) Context: Mary kicked the ball. Then...

Kó:r saharashéntho'. Kór s-wa'-ra-rashéntho-'. Paul REP-FACT-MsgA-kick-PUNC

'Paul [kicked it] again.'

 \rightarrow REP-Op is overtly realized when it's outside the verb phrase, but null when it's inside the verb phrase.

(Mirrors distinction between left- and right- adjoining 'again')

Outline

Background and proposal

2 Evidence for structural approach

3 Diagnosing syntactic complexity

4 Consequences

6 Conclusion

Diagnosing syntactic complexity

Examining the range of repetitive presuppositions available in Kanien'kéha lets us see which adjunction sites are possible.

This in turn sheds light on the argument structure and semantics of the Kanien'kéha verb.

What we've seen so far

- Declarative presuppositions (P₁)
- Subjectless presuppositions (P2) (specifically w/ non-stative transitive verbs)
- (22) Adjunction sites for a transitive verb



 \rightarrow Good in both English* and Kanien'kéha.

What about other contexts?

In English, some subjectless presuppositions and all objectless presuppositions are infelicitous (Bale 2007).

- (23) a. Mary kicked the ball. John kicked the ball again. (most transitives ✓)
 - b. Mary read the article.#John read the article again. (some transitives **X**)
 - c. Mary loved ice cream.#John loved ice cream again. (stative transitives ✗)
 - d. Mary swam. #John swam again. (intransitives ✗)

What we're going to see

All of these presuppositions are perfectly fine in Kanien'kéha.

(24) Comparing repetitive presuppositions

Presupposition	English	Kanien'kéha
Subjectless Non-stative	√/X	\checkmark
Subjectless Stative	×	\checkmark
Subjectless Intransitive	×	1
Objectless	×	\checkmark

Non-stative transitive verbs in Kanien'kéha

- (25) Context: Terrance and Katya both want to read the same copy of National Geographic magazine so they take turns borrowing it.
 - a. Terrance wahawennahnó:ton' NatGeo. Terrance wa-ra-wennahnot-on' NatGeo Terrance FACT-MsgA-read-PUNC NatGeo 'Terrance read the NatGeo.'
 - b. Sok Katya saiewennahnó:ton' NatGeo. sok Katya s-wa'-ie-wennahnot-on' NatGeo then Katya REP-FACT-FI.A-read-PUNC NatGeo 'Then Katya [read the NatGeo].' Literally: 'Then Katya [read the NatGeo] again.'

Stative transitive verbs in Kanien'kéha

- (26) Context: John was married to Mary but then they broke up. He started dating Helen.
 - Mary ronorónhkhwahkwe' ne John. Mary ro-noronhkhwa-hkwe' ne John Mary FZsg>Msg-love-F.PST NE John 'Mary loved John.'
 - b. Tánon' Helen sahonó:ronhkwe'.
 tánon' Helen s-wa'-ro-noronhkhwa-hkwe'
 and Helen REP-FACT-FZsg>Msg-love-R.PST
 'And Helen [loved him].'
 Literally: 'And Helen [loved him] again.'

Intransitive verbs in Kanien'kéha

- (27) Context: John and Paul were friends for 50 years. Last week...
 - a. ewatís wahrénheie'.
 Sewatís wa'-r-rénhe-e'.
 John FACT-MsgA-die-PUNCH
 'John died.'
 - b. Sok Kó:r sahrénheie'.
 Sok Kó:r s-wa'-r-rénhe-e'.
 then Paul REP-FACT-MsgA-die-PUNC
 'Then Paul [died].'
 Literally: 'Then Paul [died] again'

Objectless presuppositions in Kanien'kéha

- (28) Context: You went to an all-you-can-eat buffet so you fasted all day beforehand. At the buffet...
 - a. É:ri wà:keke'.

eri wa'-k-ek-'. cherry FACT-1sgA-eat-PUNC 'I ate cherries.'

b. Sok o'wà:ron sá:keke'.
sok o'wahron s-wa'-k-ek-'.
then meat REP-FACT-1sgA-eat-PUNC
'Then I [ate] meat.'
Lit: 'Then I [ate] meat again.'

Verb-only presuppositions

- Rón:kwe wahiiaterennaién:hahse'.
 ronkwe wa-ri-ate-renn-a-ien-hahs-'
 man FACT-1sg>3sg-SRFL-song-JR-place-BEN-PUNC
 'I [prayed for] the man.'
- (30) Sok è:rhar sahsaterennaién:hahse'.
 sok ehrhar s-wa'-hs-ate-renn-a-ien-hahs-'
 then dog REP-FACT-2sg-SRFL-song-JR-place-BEN-PUNC
 'Then, you [prayed for] the dog.'
 Literally: 'Then, you [prayed for] the dog again.'

Noun incorporation has no effect

- (31) Context: You, me and Jen all went on a shopping spree.
 - a. Wahshanishonhshawi'tsherahni:non'. wa-hsh-anishonhshawi-'tshera-hninon-' FACT-2sgA-ring-NMLZ-buy-PUNC 'You bought a ring.'
 - b. Sok saiehna'ta'tsherahní:non'.
 sok s-wa'-ie-hna'ta-hshera-hninon-'
 then REP-FACT-FI.A-purse-NMLZ-buy-PUNC
 'Then she [bought] a purse.'
 Literally: 'Then, she [bought] a purse again.'
 - c. Sok sakhiatonhsherahní:non'.
 sok s-wa'-k-hiaton-hshera-hninon-'
 then REP-FACT-1sgA-book-NMLZ-buy-PUNC
 'Then I [bought] a book.'
 Literally: 'Then, I [bought] a book again.'

Empirical review

(32) Available repetitive readings & their syntactic content
 <u>Reading</u> Declarative Subjectless Objectless
 <u>Content</u> [S V O] [V O] [V]

- Kanien'kéha has a wider array of presuppositions compared to many documented languages.
- Even with common presuppositions, it has fewer stipulations.
- To my knowledge, objectless repetitive presuppositions have not been documented in any other language.

Outline

1 Background and proposal

2 Evidence for structural approach

③ Diagnosing syntactic complexity

4 Consequences

6 Conclusion

Accounting for subjectless presuppositions

External arguments are syntactically severed from the verb. (Kratzer 1996, *a.o.*)

(33) Adjunction sites for a transitive verb P_1 Subject P_2 Verb Object

Accounting for objectless presuppositions

Internal arguments are ALSO severed from the verb.

(Schein 1993, Champollion 2010, Lohndal 2012)

- (34) a. Semantics of the verb/root $\llbracket EAT \rrbracket = \lambda eEAT(e)$
 - b. Introducing arguments



Putting it together



 VoiceP: an event of [Paul eating chicken] happened before

Sever the internal argument

Putting it together



- VoiceP: an event of [Paul eating chicken] happened before
- **FP:** an event of [eating chicken] happened before

Sever the internal argument

Putting it together



Extension: restitutive readings

(36) Context: Paul found a toy on the ground but I took it from him.

Sok tontahí:ion'. Sok tont-wa'-hi-on-'. then **REP**.CIS-FACT-1sg>Msg-give.to.use-PUNC

'Then I gave it back to him.' (i.e. 'Then I gave it to him and as a result, he has it again')

Accounting for restitutive readings

Result states are also severed from the verb.

(e.g., von Stechow 1996, Beck and Johnson 2005)



Outline

1 Background and proposal

2 Evidence for structural approach

③ Diagnosing syntactic complexity

④ Consequences

6 Conclusion



• Kanien'kéha has two morphemes associated with event repetition: REP-Op and concord marker.

Summary

- Kanien'kéha has two morphemes associated with event repetition: REP-Op and concord marker.
- This operator induces a uniquely wide array of presuppositions including *objectless* presuppositions.

Summary

- Kanien'kéha has two morphemes associated with event repetition: REP-Op and concord marker.
- This operator induces a uniquely wide array of presuppositions including *objectless* presuppositions.
- Despite this, Kanien'kéha event repetition can be explained under the standard structural analysis of repetitive adverbs like 'again'.
 - \rightarrow One tweak needed: sever the internal argument.

Summary

- Kanien'kéha has two morphemes associated with event repetition: REP-Op and concord marker.
- This operator induces a uniquely wide array of presuppositions including *objectless* presuppositions.
- Despite this, Kanien'kéha event repetition can be explained under the standard structural analysis of repetitive adverbs like 'again'.

 \rightarrow One tweak needed: sever the internal argument.

→ The resulting presuppositions are exactly what we'd expect within a neo-Davidsonian framework where all arguments are added after the verb.

Cross-linguistic implications

- Do other languages have objectless presuppositions? Or...why only Kanien'kéha?
- How do we account for this variation?
 - Different argument structures, same modifier
 - Same arg structure, different restrictions on modifier
- More evidence that the root can be modified directly (e.g., Pylkkänen 2008 on partway, Ahn 2022 on out-)

• More support from under-studied languages for severing the internal argument

(e.g., severing the internal argument in Eskimo-Aleut (Basilico 2019) and Mam (Elkins et al 2024))

Niawenhkó:wa!

- Akwiratékha' Martin
- Warisó:se Bush
- Katerí Deer
- Konwaronhiá:wi Helen Norton
- Mary Onwá:ri Tekahawáhkwen McDonald
- Wíshe Mittelstadt

- Alan Bale
- Luis Alonso-Ovalle
- Katya Morgunova
- Terrance Gatchalian
- Jessica Coon
- Kanien'kehá:ka Onkwawén:na Raotitióhkwa Language and Cultural Center

Appendix 1: status of object

Covert pronouns in Kanien'kéha require an antecedent.

(38) Wà:keke'. wa'-k-ek-'. FACT-1sgA-eat-PUNC
✓ 'I ate it.'
✗ 'I ate something.'

Appendix 1: status of object

Covert pronouns in Kanien'kéha require an antecedent.

- (39) a. É:ri wà:keke'. eri wa'-k-ek-'. cherry FACT-1sgA-eat-PUNC 'I ate cherries.'
 - b. Sok sá:keke'.
 sok s-wa'-k-ek-'.
 then REP-FACT-1sgA-eat-PUNC
 'Then I ate them again.'
 Cannot mean: 'Then I ate something.'
 - c. Sok othé:nen sá:keke'.
 sok othenen s-wa'-k-ek-'.
 then something REP-FACT-1sgA-eat-PUNC 'Then I ate something.'

Appendix 1: status of object

Objectless presuppositions can occur even with definite objects.

- (40) a. Ne ki' karét énhseke'. ne ki' karet en-hs-ek-' NE this cake FUT-2sgA-eat-PUNC 'You'll eat this cake.'
 - b. Tánon' ne thi' karét énskeke'.
 tanon' ne thi' karet en-s-k-ek-'
 and NE that cake FUT-REP-1sgA-eat-PUNC 'And I'll eat that cake.'
 Literally: 'I'll [eat] that cake again.'

Appendix 2: focus

Focus has no effect on disambiguating presuppositions.

- (41) Context: John and Paul are practicing kickboxing with a punching bag. John hit the bag.
 - a. Sok thí:ken **ónhka** sahakòn:reke'? sok thiken onhka s-wa'-konhrek-' then that who REP-FACT-hit-PUNC 'Then, **WHO** hit it again?'
 - b. Sok Kó:r sahakòn:reke' ne ká:iare'.
 sok Kor s-wa'-ra-konhrek-' ne kaiare'
 then Paul REP-FACT-MsgA-punch-PUNC NE bag
 'Then PAUL [hit the bag] again.' (Subject focus)

Appendix 2: focus

(42)

a. Context: Then **what** did Paul hit?

- Sok thí:ken ká:iare' sahakòn:reke'ne Paul.sok thiken kaiare' s-wa'-konhrek-'ne Paulthen that bagREP-FACT-hit-PUNC NE Paul'Then Paul [hit THE BAG] again.(Object focus)
- b. Context: Then **what** did Paul **do** to the bag?
 - Sok sahakòn:reke'ne ká:iare ne Paul'.sok s-wa'-konhrek-'ne kaiare' ne Paulthen REP-FACT-hit-PUNC NE bagNE Paul'Then Paul [HIT the bag] again.(Predicate focus)

→ Unlike role of focus in disambiguating repetitive/restitutive readings in Kutchi Gujurati (Patel-Grosz and Beck 2019) and repetitive/additive readings in Mandarin and Korean (Xu 2014, Lee 2005)

Appendix 3: Other potential operator-particle constructions

(43)a. Jah tekatá:wens. iah te-k-atawen-s no NEG-1sgA-swim-HAB 'I don't swim.' (Negating) Áhsen nikanónhsake. b. ahsen ni-ka-nonhs-a-ke three PART-N.A-house-JR-be.certain.amount '(there are) three houses' (Quantifying) Tho ja'katá:wen'. C Tho i-wa'-k-atawen-' there TRANS-FACT-1sgA-swim-PUNC 'I swam there.' (Directions/locations)