

The Repetitive Prefix and Presupposition in Kanien'kéha

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Overview

- The repetitive prefix in Kanien'kéha is said to contribute the same meaning of English *again*.
- I present evidence that while both morphemes introduce a presupposition, the scope of the repetitive's presupposition includes only the verb, no arguments.
- Implications:
 - the repetitive and 'again' are not the same
 - the repetitive can adjoin very low down, below the object
 - Kanien'kéha VPs differ fundamentally from English ones
- Where am I going with this?
 1. Phrase structure: what does it mean for the VP that the verb alone can form a propositional level? how does this effect our understanding of noun incorporation or quantifier scope?
 2. Pragmatics: why is the verb-only presupposition not always available? Context matters.
 3. Extension to other uses: does this finding help understand other uses of the prefix, such as restitutive and singular counting readings?

1 Introducing the repetitive

- In Kanien'kéha (Iroquoian), there are a number of prefixes that can be used to modify a verb. One such prefix is the so-called *repetitive*.
- According to grammars, the repetitive typically conveys the meaning 'again' like English *again* or *re-* (Bonvillain 1973; Baker 1996; Michelson et al. 2011; Martin 2023).

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|-----|----|---|-----|----|--|
| (1) | a. | Katá:wens. k-atawen-s 1sgA-swim-HAB 'I'm swimming.' | (2) | a. | Wa'khní:non'. wa'-k-hninon-' FACT-1sgA-buy-PUNC 'I bought it.' |
| | b. | Skatá:wens. s-k-atawen-s REP -1sgA-swim-HAB 'I'm swimming again.' | | b. | Sakhní:non'. s-a-k-hninon-' REP -FACT-1sgA-buy-PUNC 'I bought it again.' |

- The adverb *again* modifies propositions and introduces a presupposition (see von Stechow 1996; Jäger and Blutner 2003; Beck and Johnson 2004).

- | | | |
|-----|----|---|
| (3) | a. | Context: Mary has never bought a car. #Mary bought a car again. |
| | b. | Context: Terrance has never eaten meat in his life. #Will Terrance eat meat again? |
| | c. | Context: Wishe has never ran a marathon. #Wishe won't run a marathon again. |

2.1 Change of subject → subjectless presupposition

2.1.1 Transitive

(8) Context: Terrance and Katya both want to read a NatGeo 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 nòn:wa saiewennahnó:ton' NatGeo.
sok Katya nonhwa s-a-ie-wennahnot-on' NatGeo
then Katya now REP-FACT-FlsgA-read-PUNC NatGeo
'Then Katya read the NatGeo next.'
Lit: 'Then now Katya read the NatGeo again.'

2.1.2 Intransitive

(9) Context: we're all waiting at the doctor's office.

- a. Terrance ienhatáweia'te'.
Terrance i-on-ra-taweia't'
Terrance TRANS-FUT-MsgA-go.in-PUNC
'Terrance will go in.'
- b. Akaónha nòn:wa ientsiontáweia'te'.
akaonha nonhwa i-on-s-ion-taweia't'
she now TRANS-FUT-REP-FZsgA-go.in-PUNC
'She will go in next.'
Lit: 'Now she will go in again.'

⇒ The presupposition introduced by the repetitive does not need to include the subject.

2.2 Objects

- The presupposition introduced by the repetitive with transitive verbs can does not need to include the OBJECT either.
- The following examples show changes in:
 - number of objects

- type of object
- completely different object

2.2.1 Same object, different number

- For purposes of time/space, I'm just showing one example of each type of number change but in all cases, the inverse change is also possible with the reciprocal (e.g. 1 → 2; 2 → 1).

(10) 2 to 1 with numbers

- a. Tékeni wa'thatinonhsón:ni'.
tekeni wa'-t-rati-nonhs-onni-'
two FACT-DUP-house-make-PUNC
'They built two houses.'
- b. Sok énska sahatinonhsón:ni'.
sok enska s-a-rati-nonhs-onni-'
then one REP-FACT-house-make-PUNC
'Then, they built one house.'
Lit: 'Then, they built one house again.'

(11) Plural to singular with a verbal distributive

- a. Tsóhsera tsi náhe'
s-oshera tsi nahe'
REP-year that since
wahatinonhsonniánion'.
wa-rati-nonhs-onni-a-nion-'
FACT-MplA-house-make-JR-DISTRIB-PUNC
'Last year they built houses.'
- b. Sok nòn:wa sahatinonhsón:ni'.
sok nonwa s-a-rati-nonhs-onni-'
then now REP-FACT-MplA-house-make-PUNC
'And now they built a house.'
Lit: 'Then, they built a house again.'

(12) Plural to singular with a nominal distributive

- a. Skanonhshátshon wahatinonhsón:ni'.
s-ka-nonhs-a-tshon wa-rati-nonhs-onni-'
REP-N-car-be-DISTRIB PUNC-MplA-car-make-FACT

- ‘They built one home each.’
- b. Skanónhsa sahatinonhsón:ni’
 s-ka-nonhs-a s-a-rati-nonhs-onni-’
 REP-N-car-be REP-PUNC-MplA-car-make-FACT
 ‘Then, they built one house (all together).’
 Lit: ‘Then, they built one house again.’

- ‘I ate an apple.’
- b. Sok é:ri sakà:iake’.
 sok eri s-a-k-ahi-a-k-’
 then cherry REP-FACT-1sgA-fruit-JR-eat-PUNC
 ‘Then, I ate a cherry.’
 Lit: ‘Then, I ate a cherry again.’

2.2.2 Same object, different type

- (13) Change in brand/name
- a. Wa’ke’serahtahní:non’ ne Porsche.
 wa’-k-e’sere-hta-hninon-’ ne Porsche
 FACT-1sgA-car-NMLZ-buy-PUNC NE Porsche
 ‘I bought a Porsche.’
- b. Sake’serahtahní:non’ ne Maserati.
 s-a-k-e’sere-hta-hninon-’ ne Maserati
 REP-FACT-1sgA-car-NMLZ-buy-PUNC NE Maserati
 ‘Then, I bought a Maserati.’
 Lit: ‘Then, I bought a Maserati again.’
- (14) Change in property
- a. Ka’serehtowá:nen wa’ke’serahtahní:non’.
 ka’sere-hta-wanen wa’-k-e’sere-hta-hninon-’
 N-car-NMLZ-big FACT-1sgA-car-NMLZ-buy-PUNC
 ‘I bought a big car.’
- b. Sok ken’ nika’serehtà:’a
 sok ken’ ni-ka’sere-hta-’a
 then about PART-N-car-NMLZ-DIM
 sake’serahtahní:non’.
 s-a-k-e’sere-hta-hninon-’
 REP-FACT-1sgA-car-NMLZ-buy-PUNC
 ‘Then, I bought a small car.’
 Lit: ‘Then, I bought a small car again.’
- (15) Change in subtype (with incorporated noun)
- a. Sewahió:wane’ wa’kà:iake’.
 sewahiwane’ wa’-k-ahi-a-k-’
 apple FACT-1sgA-fruit-JR-eat-PUNC

2.2.3 Completely different object

- (16) Apple to cherries
- a. Sewahió:wane’ wà:keke’.
 sewahiwane’ wa’-k-k-’
 apple FACT-1sgA-eat-PUNC
 ‘I ate an apple.’
- b. Sok é:ri sá:keke’.
 sok eri s-a-k-k-’
 then cherry REP-FACT-1sgA-eat-PUNC
 ‘Then, I ate a cherry.’
 Lit: ‘Then, I ate a cherry again.’
- (17) Cherries to meat
- a. É:ri wà:keke’.
 eri wa’-k-k-’
 cherry FACT-1sgA-eat-PUNC
 ‘I ate cherries.’
- b. Sok o’wà:ron sá:keke’.
 sok o’wahron s-a-k-k-’
 then meat REP-FACT-1sgA-eat-PUNC
 ‘Then, I ate meat.’ Lit: ‘Then, I ate meat again.’
- Noun incorporation does not seem to affect the felicity of the repetitive.
- (18) Context: we all went on a shopping spree: me, you, and Jen.
- a. Wahshanishonhshawi’tsherahní:non’.
 wa-hsh-anishonhshawi-’tshera-hninon-’
 FACT-2sgA-ring-NMLZ-buy-PUNC
 ‘You bought a ring.’

- b. Sok saiehna'ta'tsherahní:non'.
 sok s-a-ie-hna'ta-hshera-hninon-'
 then REP-FACT-FlsgA-purse-NMLZ-buy-PUNC
 'Then she bought a purse.'
- c. Sok sakhiatonhsherahní:non'.
 sok s-a-k-hiaton-hshera-hninon-'
 then REP-FACT-1sgA-book-NMLZ-buy-PUNC
 'Then I bought a book.'

2.3 Both subject and object

- Based on the above evidence, the repetitive should be able introduce a presupposition that includes neither the subject nor the object.

- (19) Different subject, different object
- a. 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.'
- b. Sok è:rhar sahsaterennaién:hahse'.
 sok ehrhar s-a-hs-ate-renn-a-ien-hahs-'
 then dog REP-FACT-2sg-SRFL-song-JR-place-BEN-PUNC
 'Then, you prayed for the dog.'
 Lit: 'Then, you prayed for the dog again.'

- (20) Context: Paul and Joe are kids who are going to a wedding.
- a. Kó:r wahatia'tahserón:ni'.
 Kor wa-r-at-ia't-a-hseronni-'
 Paul FACT-MsgA-SRFL-body-JR-dress.up-PUNC
 'Paul got dressed up.'
- b. Sok Só:se' ro'nihsténha
 sok Sose ro-'nistenha
 then Joe his-mother
 sahonwahserón:ni'.
 s-a-ronwa-hseronni-'
 REP-FACT-Flsg>Msg-dress.up-PUNC
 'Then Joe's mom dressed him up.'

2.4 Adverbials

- The repetitive seems to work when changing adverbials as well.
- (21) Context: Katya recently started a training regimen for swimming where she tries to swim at least once every day.
- a. Tontenhniserakiérihte' Katya wa'ontawen'.
 tontenhniseratierihthe' Katya wa-i-atawen-'
 the first day Katya FACT-FlsgA-swim-PUNC
 'The first data, Katya swam.'
- b. Sok tekenihaton awenhnisera saiontawen'.
 sok tekenihaton awenhnisera s-a-i-atawen-'
 then second day REP-FACT-FlsgA-swim-PUNC
 'Then, the second day, she swam again.'
- (22) Time of day
- a. Katya ohrhon'kè:ne wa'ontawen'.
 Katya ohrhon'kehne wa-i-atawen-'
 Katya in.the.morning FACT-FlsgA-swim-PUNC
 '(The first day) Katya swam in the morning.'
- b. Sok iotohétston néntie saiontawen'.
 sok iotohetston nentie s-a-i-atawen-'
 then in.the.afternoon REP-FACT-FlsgA-swim-PUNC
 'Then, (the second day) she swam in the afternoon.'
- However, I have found some variation in the acceptability of the repetitive with manner adverbials. One speaker judged the example below felicitous and another did not.
- (23) Manner
- a. Katya ioshnó:re' wa'ontawen'.
 Katya ioshnore' wa-i-atawen-'
 Katya quickly FACT-FlsgA-swim-PUNC
 '(The first day) Katya swam quickly.'
- b. (#)Sok skenèn:'a saiontawen'.
 sok skenen'a s-a-i-atawen-'
 then slowly REP-FACT-FlsgA-swim-PUNC
 'Then, (the second day) she swam slowly.'

- I've also had trouble in getting felicitous uses of the repetitive with location adverbials and repeated actions.

(24) Location – locative

- a. Katya Kanehsatà:ke ta'ontawen'.
 Katya Kanehsatahke t-a-i-atawen-'
 Katya Kanehsatake TRANS-FACT-FIsgA-swim-PUNC
 '(The first day) Katya swam in Kanehsatake.'
- b. #Sok Kahnawà:ke saiontawen'.
 sok Kahnawahke s-a-i-atawen-'
 then Kahnawake REP-FACT-FIsgA-swim-PUNC
 Intended: 'Then, (the second day) she swam in Kahnawake.'

- Note: the translocative appears in the above example and could be affecting it. If so, this shows that other prefixes may affect the ability to use the repetitive.

(25) Location – *tsi*

- a. Tsi kaniataráhere' wa'ontá:wen'.
 tsi kaniatarahere' wa'-i-atawen-'
 at lake FACT-FIsgA-swim-PUNC
 'She swam in the lake.'
- b. #Sok tsi kaniataratátie' saiontá:wen'.
 sok tsi kaniataratatie' s-a'-i-atawen-'
 then at river REP-FACT-FIsgA-swim-PUNC
 Intended: 'Then she swam in the river.'

(26) Number of times

- a. Tékeni ia'tká:ienhte' wahatá:wen'.
 tekeni ia'tkaienhte' wa-r-atawen-'
 two time.DUP PUNC-MsgA-swim-FACT
 'He swam two times.'
- b. #Énska ia'ká:ienhte' sahatá:wen'.
 enska ia'kaienhte' s-a-r-atawen-'
 one time REP-PUNC-MsgA-swim-FACT
 Intended: 'He swam again one time.'

2.5 The verb cannot change

- Though this may seem obvious, it's useful to note that the verb itself cannot change between co-text and repetitive sentence.

(27) 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-a-ra-rahsentho-'
 then bag REP-FACT-MsgA-kick-PUNC
 'Then he kicked the bag.'
 Must mean: 'Then he kicked the bag again.'

- This means that the presupposition triggered by the repetitive does have a syntactic complement and is not a fully pragmatic presupposition (see, e.g. [Shudo 2002](#) on the Japanese particle *mo*).

2.6 Summary

- The repetitive can appear felicitously even when the co-text has a different subject, object, or both.
- It can also appear with some adverbials but not all(?).

⇒ The presupposition introduced by the repetitive can include only the verb.

⇒ Certain adverbials may adjoin lower than the repetitive.

3 Presuppositions and propositional complexity

- Following [Bale 2007](#), I argue that the distribution of the repetitive belies the presence of a propositional level in the structure of the Kanien'kéha VP which differs from English.

- Specifically, the verb alone can constitute a proposition which can be modified. This means that there are three levels at which Kanien'kéha sentences can be modified: at the verb, at the VP, and at the full sentence.

3.1 *again* as a diagnostic of syntactic complexity

- Examining English, Bale (2007) uses the scope of the presupposition triggered by *again* to diagnose syntactic complexity.
- He takes that the content of the presupposition introduced by a sentence with *again* is determined by the repetitive's syntactic complement.
- Additionally, this syntactic complement represents a propositional level.
- The result is that we can see different levels of propositional (and therefore syntactic) complexity in English by looking at the distribution of *again*.

3.1.1 Level 1: *again* adjoins to declarative sentences

- For intransitive verbs, *again* scopes over the subject and the verb. This means that the presupposition must include the same subject and verb as the sentence with *again*.

- (28) Context: Yesterday, Harry danced. It looked like so much fun that it inspired others to dance and. . .
- Today, [Harry danced] again.
 - #Today, [Megan danced] again.

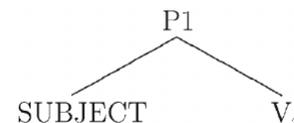
- Similarly, *again* scopes above the subject with stative, transitive verbs.

- (29) Context: When she was little, Akwiratékha's friend loved Björk even though no one else at school did. Eventually, she grew out of the phase but then Björk released a new album and Akwiratékha' and his friend listened to it together. It was so good that. . .
- [Akwiratékha's friend loved Björk] again.
 - #[Akwiratékha' loved Björk] again.

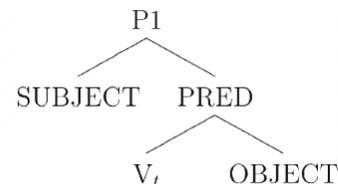
⇒ For both of these types of verbs, the presupposition *must* include the subject.

⇒ Both verb types possess only one propositional level in the VP which *again* can adjoin to for modification.

- (30) Intransitives
 $\llbracket \textit{dance} \rrbracket = \lambda x \lambda e \text{DANCE}(x,e)$



- (31) Stative transitives
 $\llbracket \textit{love} \rrbracket = \lambda y \lambda x \lambda e \text{LOVE}(x,y,e)$



3.1.2 Level 2: *again* adjoins to VPs

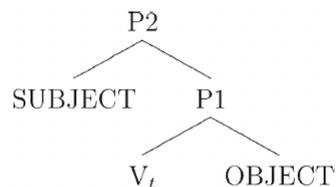
- With non-stative transitive verbs the subject doesn't always need to be included in the presupposition.

- (32) Context: 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. . .
- The repairwoman hit the dryer again.
 - Seymour hit the dryer again.

⇒ Non-stative transitives have multiple propositional levels within the VP.

⇒ *again* can adjoin at either level.

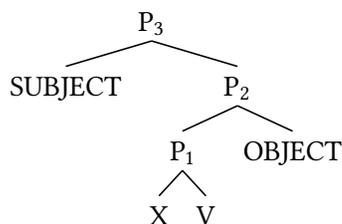
- (33) Non-stative transitives
 $\llbracket \textit{hit} \rrbracket = \lambda x \lambda e \text{HIT}(x,e)$



3.2 Propositional complexity and the repetitive: a third level?

- If we take these same assumptions, it would seem that there is an additional propositional level in Kanien'kéha, below the object.
 - Apparently, *all* Kanien'kéha verbs have this third propositional level since I have not found any asymmetries between verb types, like English has.
- ⇒ Kanien'kéha possesses a propositional level above V and below the object.
- Based on the early findings with adverbials, it appears that some adverbial modifiers – manner, location(?) – may adjoin below this propositional level while all subjects, objects, and other adverbials adjoin above.

(34) Kanien'kéha verbs
 [[eat]] = λeEAT(e)



- Questions:
 - What else is below P₁?
 - How do objects join?
 - If internal arguments are implicit, perhaps the repetitive scopes over *pro* arguments ('the event of eating something occurred')?

3.3 'Again' as a particle: evidence for propositional complexity

- Kanien'kéha also has a stand-alone particle *à:re* that has been translated as English 'again'.
- To my knowledge, it must occur with the repetitive.
- When it occurs, it forces certain readings based on where it appears in the sentence.
- When it appears at the start of the sentence, it triggers the highest scope reading.

(35) a. É:ri wà:keke'.
 eri wa'-k-k-'
 cherry FACT-1sgA-eat-PUNC
 'I ate cherries.'

b. Sok **á:re** [o'wà:ron sá:keke'].
 sok are' o'wahron s-a-k-k-'
 then again meat REP-FACT-1sgA-eat-PUNC
 'Then, I went back to eating meat.'
 Cannot mean: 'Then, I ate meat.'

- When it occurs after an argument/adjunct that is before the verb, it scopes below this element.

(36) a. Katya ohrhon'kè:ne wa'ontawen'.
 Katya ohrhon'kehne wa-i-atawen-'
 Katya in.the.morning FACT-FIsgA-swim-PUNC
 'Katya swam in the morning.'

b. Sok iotohétston néntie [saiontawen'].
 sok iotohetston nentie s-a-i-atawen-'
 then in.the.afternoon REP-FACT-FIsgA-swim-PUNC
 'Then, [she swam] in the afternoon.'

c. Sok **á:re** [iotohétston néntie saiontawen'].
 sok are' iotohetston nentie s-a-i-atawen-'
 then again in.the.afternoon REP-FACT-FIsgA-swim-PUNC
 'Then, [she swam in the afternoon] again.'

- d. Sok iotohétston néntie á:re' [saiontawen'].
 sok iotohetston nentie are' s-a-i-atawen-'
 then in.the.afternoon again REP-FACT-1sgA-swim-PUNC
 'Then, [she swam] again in the afternoon.'

4 Context and pragmatics

- It is not always the case that the verb-only presupposition reading is available. Sometimes, the same sentence may be judged differently by different speakers or the same speakers between different weeks.

- (37) a. #Thetén:re' Katya ontá:wen' sok nòn:wa
 thetenre' Katya wa'-w-atawen-' sok nonhwa
 yesterday Katya 1sgA-swim-PUNC then now
 Terrance sahatá:wen'.
 Terrance s-a-r-atawen-'.
 Terrance REP-FACT-1sgA-swim-PUNC
 Intended: 'Yesterday, Katya swam, then today Terrance
 swam.'
 Must mean: '... Terrance swam again.'
- b. Katya ontá:wen' sok Terrance nòn:wa
 Katya wa'-w-atawen-' sok Terrance nonhwa
 Katya 1sgA-swim-PUNC then Terrance now
 sahatá:wen'.
 s-a-r-atawen-'.
 REP-FACT-1sgA-swim-PUNC
 'Katya swam, then Terrance swam next.'

- It seems that *context* is extremely important in licensing the low scope presuppositions.
- Some things that have helped get this reading:
 - the use of sequential/consequential morphology, such as *sok* 'then' and *nòn:wa* 'now/next'
 - contexts that include turn-taking or steps
 - closer timing of events

– closer relationship of arguments

- Outstanding question: can the relationship between context and the interpretation be formalized?
- Bale (2007) has a similar issue in discussing subjectless presuppositions with transitive verbs in English, noting that (i) this doesn't occur with all such verbs, and (ii) sometimes the context affects the felicity.

(38) *read* allows a subjectless presupposition

- Co-text: Before Esme goes to sleep, her mother and father both read her one story each. On Monday, Esme's mother read her Little Red Riding Hood. Then, not knowing what the previous story was,
- Esme's father read it again the very same night.

(39) *read* prohibits a subjectless presupposition

- Co-text: Fred read the article about how to be successful in business. After he was finished, he suggested to Seymour that he might be interested in it. So...
- #Seymour read the article again.

5 Other uses for the repetitive

- restitutive

- (40) a. Wà:kewe'.
 wa'-k-w-'
 FACT-1sgA-arrive-PUNC
 'I arrived.'
- b. Sá:kewe'.
 s-a-k-w-'
 REP-FACT-1sgA-arrive-PUNC
 'I arrived again / I arrived home.'

- lexicalized?

- (41) a. Sonke'nikónhrhen'.
 sa-wa'-k-'nikonhrhen-'
 REP-FACT-1sgA-forget-PUNC
 'I forgot it.'
- b. Á:re' sonke'nikónhrhen'.
 are' sa-wa'-k-'nikonhrhen-'
 again REP-FACT-1sgA-forget-PUNC
 'I forgot it again.'

- counting one thing

- (42) a. kanà:tson
 ka-nats-on
 N-pail-NOM
 'bucket'
- b. skanà:tsa
 s-ka-nats-a
 REP-N-pail-be.one
 'one bucket'

von Stechow, Arnim. 1996. The different readings of *wieder* "again": A structural account. *Journal of Semantics* 13:87–138.

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