More *again* readings and more *again* morphemes: A structural analysis of Kanien'kéha *again*[1]

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Abstract. This paper examines *again* readings in Kanien'kéha, shining new light on the debate between structural and lexical analyses of *again* ambiguity. In addition to previously analyzed repetitive, restitutive, and counterdirectional readings, Kanien'kéha has two novel phenomena through which present potential challenges to past analyses. First, Kanien'kéha *again* gives rise to typologically rare *objectless* repetitive readings in which a similar event containing the same verb but a different internal argument is presupposed. Second, Kanien'kéha possesses two, co-occurring *again* morphemes. In investigating these phenomena, I argue that a structural approach most naturally accounts for the Kanien'kéha facts, with one major implication. To account for the availability of objectless repetitive presuppositions under such an approach, I argue for the severing of the internal argument (contra, e.g., Kratzer 1996). With this in place, I propose that a single repetitive operator with variable scope can give rise to the full array of *again* readings in Kanien'kéha, as predicted by a structural approach.

Keywords: again, presuppositions, ambiguity, repetitive, restitutive, Kanien'kéha.

1. Introduction

It has been widely noted that the event-modifying adverb *again* and its cross-linguistic counterparts give rise to ambiguity (McCawley 1968; Dowty 1979; von Stechow 1995, 1996; Fabricius-Hansen 2001; Jäger and Blutner 2000; Beck 2005; Beck and Gergel 2015, among many others). In Kanien'kéha (a.k.a. Mohawk; Northern Iroquoian), the *again*-type element *s-*, referred to in the Iroquoianist tradition as the repetitive prefix (and glossed as REP), gives rises to distinct REPETITIVE, RESTITUTIVE, and COUNTERDIRECTIONAL readings, as shown in (1).[2]

(1) Iontkahri:tha' **s**a-hí:i-on-'.
toy **REP**.FACT-1sg<Msg-give-PUNC
'I gave him the toy AGAIN.'
a. I gave him the toy and I had done that before. (Repetitive)
Context: Yesterday, I gave Otto the toy but he forgot to take it home. Today, I gave it to him *again*.
b. I gave him the toy and he had possessed it before. (Restitutive)
Context: Otto found a toy on the ground. I took it from him. Then, I gave it *back* to him.

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[2]Abbreviations follow Leipzig glossing conventions with the following additions from Iroquoianist literature: DUP = duplicative; FACT = factual; HAB = habitual; NMLZ = nominalizer; PUNC = punctual; REP = repetitive; and TRANS = translocative. Agreement prefixes belong to one of three categories: agentive/subjective (A); patientive/objective (P) or transitive (X>Y) where X is the agent and Y is the patient.

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c. I gave Otto the toy and the reverse had happened before. (Counterdirectional)
Context: Yesterday, Otto gave me the toy and today, I gave the toy to him *in return*.

Past analyses of such ambiguity take two primary approaches. On one side, the STRUCTURAL AMBIGUITY ANALYSIS (Morgan, 1969; McCawley, 1968; Dowty, 1979; von Stechow, 1995, 1996; Beck and Johnson, 2004; Beck, 2005) proposes that ambiguity arises as the result of syntactic scope, with a single repetitive *again* adjoining at different levels of the derivation to give rise to different readings. On the other side, the LEXICAL AMBIGUITY ANALYSIS (Kamp and Rossdeutscher, 1994; Jäger and Blutner, 2000; Fabricius-Hansen, 2001; Pederson, 2015) argues that ambiguity arises as the result of polysemy, with *again* having multiple lexical entries: one that derives repetitive readings and the other that derives restitutive/counterdirectional readings.

Drawing on novel data from Kanien'kéha, this paper sheds new light on this debate. Kanien'kéha provides a compelling context in which to investigate this topic because Kanien'kéha contains two *again*-related phenomena which have rarely been attested cross-linguistically and have yet to be accounted for theoretically. First, Kanien'kéha *again* gives rise to a surprisingly wide range of readings. Most notably, Kanien'kéha has repetitive readings with objectless presuppositions in which only the verb is included in the scope of the repeated event. An example of an objectless repetitive reading is shown in (2). Even though the object changes between the co-text (2a) and the repetitive clause (2b), the use of the *again* element *s-* is still felicitous, indicating that the presuppositional content excludes the internal argument.[3]

(2) Context: Yesterday, Paul went to his favorite restaurant. He didn't eat anything all day beforehand. When he got to the restaurant…
a. Kowá:nen ka'warakarí:ta wà:-ra-k-e'.
big steak FACT-MsgA-eat-PUNC
'He ate a big steak.'
b. Sok nòn:wa kítkit **s**a-ha-'wà:ra-k-e'.
then now chicken **REP**.FACT-MsgA-meat-eat-PUNC
'Then, he ate chicken.'
Presupposes only: 'An eventing of eating happened before.'

Second, unlike previously studied languages, Kanien'kéha has two *again* morphemes whose co-occurrence has semantic effects. As shown in (19), the *again* element *s-* can occur with a second *again* element *á:re'*. However, when they appear together, all non-repetitive readings are blocked.

(3) **Á:re'** iontkahri:tha' **s**a-hí:i-on-'.
again toy **REP**.FACT-1sg<Msg-give-PUNC
'Again, I gave him the toy.' (Repetitive)
Cannot mean: 'I gave the toy back to him.' (Restitutive/counterdirectional)

In assessing these two phenomena within the context of structural and lexical analyses, I ultimately argue that a structural approach is the most suitable for explaining the Kanien'kéha data. In doing so, I present a unified analysis of both *again* morphemes in the language which ex-

[3]As seen in (2b), the co-occurrence of the repetitive prefix with other prefixes such as the factual FACT sometimes results in fused morphemes. This has no effect on the interpretation of the utterance and appears to be a purely morphophonological process.

plains their apparent scope effects and can also be extended to unexpected objectless repetitive readings. Specifically, to account for the availability of objectless repetitive presuppositions under a structural analysis, I argue that both external and internal arguments in Kanien'kéha are syntactically severed from the verb (in line with Schein 1993; Champollion 2010; Lohndal 2012 and contra Kratzer 1996 and others). With this argument structure in place, I argue that a single repetitive operator can generate the full range of *again* interpretations in Kanien'kéha, including repetitive, restitutive, and counterdirectional readings, exactly as predicted under a structural approach.

The remainder of this paper is organized as follows. Section 2 provides an overview of past analyses of *again* ambiguity. Section 3 presents the empirical landscape of Kanien'kéha *again*. In addition to previously analyzed repetitive, restitutive, and counterdirectional readings, Kanien'kéha also has two new phenomena requiring analysis: *objectless* repetitive readings and the existence of two, often co-occurring *again* morphemes. Sections 4 and 5 investigate these two phenomena in the context of past analyses, ultimately arguing that a structural approach is the most appropriate explanation for the full Kanien'kéha facts. To support this, Section 4 examines the co-occurrence of *s-* and *á:re'*, arguing that the interaction of the two *again* elements is syntax-sensitive, in line with a structural account where syntactic structure affects available readings. Section 5 then extends this analysis to objectless repetitive readings, proposing that a structural approach naturally predicts the existence of such low-scoping presuppositions especially if we assume a neo-Davidsonian argument structure in which the verb is a bare event predicate. This assumption also gets us counterdirectional readings for free, without the need for a second counterdirectional *again*. Finally, 6 summarizes and concludes.

2. Past accounts of *again* ambiguity

This section presents an overview of the two main approaches to *again* ambiguity in advance of their potential application to Kanien'kéha.

2.1. Structural ambiguity analysis

The structural approach derives the multiplicity of *again* readings as a structural ambiguity. This approach, most notably represented by von Stechow (1995, 1996), posits a single lexical entry for *again* which gives rise to both repetitive and restitutive readings. An ambiguity arises because the same repetitive *again* can adjoin to different constituents in the clause. This approach begins with the uncontroversial definition of repetitive *again* as a modifier of properties of events which contributes a presupposition that a similar event to the described event has already occurred. The generally accepted semantics of repetitive *again* is formalized in (4a) where *v* is the semantic type of eventualities (states and events) and *t* is the semantic type of truth values. Its use is exemplified in (4b); in this and future examples, the scope of *again* is indicated with square brackets.

(4) a. $[\![again_{\text{REP}}]\!]_{\langle\langle v,t\rangle,\langle v,t\rangle\rangle} = \lambda P_{\langle v,t\rangle}.\lambda e\text{: } \exists e'\ [e' \prec e\ \&\ P(e')].\ P(e)$
b. Mary swam again.

[Mary swam] again$_{REP}$
Presupposes: 'An event of Mary swimming occurred before.'

To derive restitutive readings with the same repetitive *again*, proponents of the structural ambiguity analysis argue for the decomposition of certain predicates into causing events and result states, both of which denote the proper semantic type to be modified by *again*. When *again* appears with a verb that has a result state, like 'close', it can either adjoin high, modifying the causing event (X causing Y to be closed), or low, modifying the result state (Y being closed). The former results in a repetitive reading while the latter results in a restitutive reading. This distinction is exemplified in (5). Following von Stechow's original proposal, I represent the result state as a small clause.

(5) Paul closed the door again.
   a. [Paul CAUSE [$_{SC}$ close the door]] again$_{REP}$ (Repetitive)
   Presupposes: 'An event of Paul causing the door to be closed occurred before.'
   b. Paul CAUSE [$_{SC}$ close the door] again$_{REP}$ (Restitutive)
   Presupposes: 'A state of the door being closed occurred before.'

In this way, both repetitive and restitutive readings are derived from a single repetitive *again* whose ability to attach at different levels of the derivation leads to structural ambiguity.

2.2. Lexical ambiguity analysis

The lexical approach to *again* ambiguity, commonly represented by Fabricius-Hansen 2001, posits a lexically ambiguous *again* with two distinct lexical entries: one with the repetitive semantics proposed above and another which expresses reversal of direction and leads to a restitutive reading. Both adjoin to nodes of type $\langle v,t\rangle$, but the second, counterdirectional *again* presupposes a preceding event that is the *reverse* of the described event. The semantics of counterdirectional *again* is formalized in (6) where P_C is the reverse of P.

(6) $[\![again_C]\!]_{\langle\langle v,t\rangle,\langle v,t\rangle\rangle} = \lambda P_{\langle v,t\rangle}.\lambda e\colon \exists e'\ [e' \prec e\ \&\ P_C(e')].\ P(e)$

In the case of predicates with result states, the presupposition that a counterdirectional event precedes the asserted event gives rises to the understanding that the asserted result state has returned, supporting a restitutive reading. Two examples of this are shown in (7) with counterdirectional *again* scoping both above (7a) and below (7b) the external argument. This scopal variation is expected assuming that *again* can modify any property of events and the external argument is severed from the verb.

(7) a. Context: The door was closed. Paul opened it. Then…
   [Paul closed the door] again$_C$
   Presupposes: 'An event of Paul *opening* the door occurred before.'
   b. Context: The door was closed. The wind blew it open. Then…
   Paul [closed the door] again$_C$
   Presupposes: 'An event of *opening* the door occurred before.'

Outside of restitutive readings, the lexical ambiguity approach has also been used to explain the availability of distinct *counterdirectional* readings with *again* adverbs. In languages such

as Dutch (Zwarts, 2019) Kutchi Gujurati (Patel-Grosz and Beck, 2019), and Middle English (Beck and Gergel, 2015), a single morpheme gives rise to repetitive, restitutive, and counterdirectional readings, as demonstrated in (8). This is different from Modern English where counterdirectional readings typically require the adverb 'back'.

(8) Kutch Gujurati (Patel-Grosz and Beck, 2019)

a. Valji **pacho** nachyo.
Valji AGAIN danced
'Valji danced again.' (Repetitive)

b. Reena **pacho** dharvajo kolyo.
Reena AGAIN door opened
'Reena opened the door again.' (Restitutive)

c. Valji **pacho** Maya-ne kagar lakhyo.
Valji AGAIN Maya-DAT letter wrote
'Valji wrote Maya a letter in return.' (=he wrote back) (Counterdirectional)

Thus, within this approach, a lexically ambiguous *again* with two possible meanings – repetitive or counterdirectional – can account for the full range of interpretations available with *again*.

3. Empirical data: Kanien'kéha 'again'

This section presents the empirical landscape of Kanien'kéha *again*, focusing on the range of readings available in *again* clauses and the two *again* morphemes at play. Section 3.1 introduces the Kanien'kéha language and the first *again* morpheme, the so-called 'repetitive prefix' *s-*, demonstrating that the presence of this prefix indicates the introduction of a presupposition akin to that of cross-linguistic *again*. Like in many languages, Kanien'kéha *again* gives rise to repetitive, restitutive, and counterdirectional readings. Section 3.2 adds to the empirical facts, demonstrating the existence of objectless repetitive readings, a typologically rare and heretofore unaccounted for phenomenon. Finally, section 3.3 introduces the second *again* element, the free-standing word *á:re'*, and documents its co-occurrence with the repetitive prefix. This empirical overview functions as the foundation for the theoretical discussion to follow.

3.1. Introducing Kanien'kéha *s-* as an element akin to English *again*

Kanien'kéha is spoken by ∼600 people in Quebec, Ontario, and New York state (DeCaire, 2023). The vast majority of speakers are Elders who learned Kanien'kéha as their first language but there is also a growing number of fluent second-language speakers (Stacey, 2016). All unattributed examples in this paper come from fieldwork conducted by the author in collaboration with four native speakers of Kanien'kéha and one advanced second-language speaker. This research adopts standard theoretically-driven fieldwork methodology (see, e.g., Matthewson 2004, Bowern 2008, and Bochnak and Matthewson 2020).

Like other Northern Iroquoian languages, Kanien'kéha is polysynthetic, making use of a host

of derivational and inflectional morphology particularly in verbs. A standard verb form is presented in (9). Minimally, the verb includes a pronominal prefix expressing agreement, a verb stem, and an aspectual suffix.

(9) (PRE-PRONOMINAL PREFIX –) PRONOMINAL PREFIX – [VERB STEM] – ASPECT

In addition to this, verbs can also appear with a set of "pre-pronominal prefixes" which contribute a wide array of grammatical information ranging from modality and negation to direction and location (Mithun, 2017). One such pre-pronominal prefix is the "repetitive" prefix *s-*. Grammars of the language (Bonvillain, 1973; Michelson et al., 2011; Martin, 2023) equate this prefix with English *again*, linking its meaning to event repetition. Like *again*, the inclusion of the repetitive prefix gives rise to a REPETITIVE reading, as seen in (10).

(10) a. K-atá:wen-s.
1sgA-swim-HAB
'I'm swimming.'
b. **S**-k-atá:wen-s.
REP-1sgA-swim-HAB
'I'm swimming again.'

As with English *again*, the presence of the repetitive prefix introduces a presupposition that a similar event occurs temporally prior to the event being asserted. In the example above, the sentence (10a) asserts that the speaker is swimming. When the repetitive prefix is added, as in (10b), the resulting sentence asserts that the speaker is currently swimming while also presupposing that the speaker has swam some time before. Evidence for this presuppositional status comes from projection facts. When the repetitive occurs within the scope of negation, as in (11), the presupposed content still projects.

(11) Context: you've never bought a car.
#Iah te-**s**-ke-'sere-hta-hní:non-s.
no NEG-**REP**-1sgA-car-NMLZ-buy-HAB
Intended: 'I am not buying a car again.'

Given that *again* in other languages gives rise to non-repetitive readings, it is unsurprising that Kanien'néha's version of *again* also supports a range of different interpretations. In addition to repetitive readings, as seen in (10) and (11), the prefix can also be used to express RESTITUTIVE and COUNTERDIRECTIONAL readings, shown in (12) and (13) respectively.[4]

(12) Context: My mom put my shoes on this morning. I took them off to play. Now...
Te-**s**-k-ráhta'-s.
DUP-**REP**-1sgA-put.shoes.on-HAB
'I'm putting my shoes back on.' (Restitutive)

(13) Context: Mary called me yesterday. Today...
I-**onsa**-khe-iatewennáta'a-hs-e'.
TRANS-**REP**.FACT-1sg<FI-call-BEN-PUNC
'I called her back.' (Counterdirectional)

[4]When certain prefixes occur before the repetitive prefix, it is realized as *ons-* instead of *s-*, as seen in (13).

3.2. Objectless repetitive readings

Like in English, Kanien'kéha has repetitive readings of varying scopes. The repetitive prefix can be used to introduce a repetitive presupposition which scopes above the subject or below the external argument, as shown in (14).

(14) Kó:r **sa**-ha-rashéntho-' ne ahthenno.
Paul REP.FACT-MsgA-kick-PUNC NE ball
'Paul kicked the ball again.'
a. [Paul kicked the ball] again$_{REP}$ (Above external argument)
Presupposes: 'An event of Paul kicking the ball occurred before.'
b. Paul [kicked the ball] again$_{REP}$ (Below external argument)
Presupposes: 'An event of kicking the ball occurred before.'

These interpretations can be naturally derived as the result of a structural ambiguity with each interpretation corresponding to a different possible structure (see, e.g., Bale 2007).

Unlike English, however, Kanien'kéha repetitive presuppositions can also exclude the *internal* argument. An example of an 'objectless' repetitive reading is shown in (15) where the event asserted in the repetitive clause does not involve the same internal argument as the co-text. The sentence in (15b), which asserts that the speaker ate meat, is felicitous in a context where this was the first time the speaker *ever* ate meat, indicating that the internal argument 'meat' is not a part of the repetitive presupposition that has been introduced.

(15) Context: I'm a vegetarian but this morning, I decided to eat meat for the first time. At breakfast, I ate some cherries and then I ate meat...
a. É:ri wà:-ke-k-e'.
cherry FACT-1sgA-eat-PUNC
'I ate cherries.'
b. Sok o'wà:ron **sá:**-ke-k-e'.
then meat **REP**.FACT-1sgA-eat-PUNC
'Then I [ate] meat.'
Presupposes: 'An event of eating occurred before.'
Does NOT presuppose: 'An event of eating *meat* occurred before.'

Similar interpretations are also available with predicates which are typically assumed to take only an internal argument. When the repetitive prefix occurs with an unaccusative verb like 'die', it is not necessary for the single argument of the verb to remain the same between co-text and repetitive clause. As seen in (16), the repetitive prefix is felicitous with the verb 'die' even though it is the first time Paul, the sole argument, has died.

(16) Context: John and Paul were friends for 50 years. Last week...
a. Sewatís wa'-hr-énhei-e'.
John FACT-MsgA-die-PUNCH
'John died.'
b. Sok Kó:r **sa**-hr-énhei-e'.
then Paul **REP**.FACT-MsgA-die-PUNC
'Then Paul [died].'

Presupposes: 'An event of dying occurred before.'

In this same vein, transitive repetitive clauses can give rise to repetitive readings where neither the subject nor the object are included in the presupposition. An example of this is shown in (17) where an event of praying is repeated but with a different agent and beneficiary.

(17) a. Rón:kwe wa-hii-aterennaién:-hahse-'.
man FACT-1sg<3sgA-pray-BEN-PUNC
'I prayed for the man.'

b. Sok è:rhar **sa**-hs-aterennaién:-hahse-'.
then dog **REP**.FACT-2sgA-pray-BEN-PUNC
'Then, you prayed for the dog.'
Presupposes: 'An event of praying occurred before.'

Crucially, Kaniien'kéha objectless presuppositions are repetitive, not additive as some English translations may suggest. While it is possible for the internal argument to change from co-text to repetitive clause, it is not possible for the verb itself to change, like we would expect with an additive element. The infelicity of the repetitive in such an additive context is shown in (18).

(18) Context: John is practicing his kickboxing with a punching bag.

a. Netontiétenhte' ká:iare' wa-ha-kòn:rek-e'.
at.first bag FACT-MsgA-punch-PUNC
'First, he punched the bag.'

b. #Sok ká:iare' **s**a-ha-rahséntho-'.
then bag **REP**.FACT-MsgA-kick-PUNC
Cannot mean: 'Then he also kicked the bag.'
Can only mean: 'Then he kicked the bag again.'

This distinguishes Kanien'kéha's objectless repetitive readings from similar readings documented in other languages (see, e.g., Matthewson and Davis (2022) on Salish; Xu 2016 on Mandarin; Seungho Nam (p.c.) for Korean). In these other languages, the morpheme in question can be used in repetitive *and* additive contexts. This is not the case for Kanien'kéha, solidifying the claim that *s-* is a cross-linguistic counterpart of *again* (and not an additive morpheme like *too*) and establishing Kanien'kéha's objectless presuppositions as a relatively unique cross-linguistic phenomenon.

3.3. Two *again* morphemes: *s-* and *á:re'*

Outside of its contribution to a surprisingly wide range of readings, the Kanien'kéha repetitive prefix is also noteworthy for its co-occurrence with a second *again* morpheme. In addition to occurring on its own, the repetitive prefix sometimes appears with *á:re'*, also translated as 'again'. Unlike the repetitive prefix, *á:re'* is not affixed to the verb but stands on its own, as seen in (19). In this example, the sentence has the same interpretation with or without *á:re'*.

(19) (**Á:re'**) **s**-k-atá:wen-s.
again **REP**-1sgA-swim-HAB
'I'm swimming again.'

Crucially, the co-occurrence of the two repetitive morphemes is not wholly optional. While the repetitive prefix *s-* can appear without *á:re'*, the inverse is not allowed. As shown in (20), the presence of *á:re'* anywhere in the sentence, before or after the verb, necessitates the presence of a repetitive prefix on the verb stem.

(20) a. **Á:re'** *(**s**)-k-atáwen-s.
again **REP**-1sgA-swim-HAB
'I'm swimming again.'
b. *(**S**)-k-atáwen-s **á:re'** .
REP-1sgA-swim-HAB **again**
'I's swimming again.'

What's more, the appearance of *á:re'* does not always have a null effect on the interpretation of the clause. While a clause with the prefix *s-* is ambiguous between a repetitive or restitutive reading, only a repetitive reading is available when *á:re'* is present. This is exemplified in (21) where (21a) shows a clause with only *s-*, ambiguous between repetitive and restitutive readings, and (21b) shows the same clause with *á:re'*, which allows only the repetitive reading.

(21) a. Te-**s**-k-ráhta'-s.
DUP-REP-1sgA-put.shoes.on-HAB
✓ Restitutive: 'I'm putting my shoes back on.' (someone else put them on before)
✓ Repetitive: 'I'm putting my shoes on again.' (I put them on before too)
b. **Á:re'** te-**s**-k-ráhta'-s.
again DUP-REP-1sgA-put.shoes.on-HAB
✗ Restitutive: 'I'm putting my shoes back on.' (someone else put them on before)
✓ Repetitive: 'I'm putting my shoes on again.' (I put them on before too)

It is not just the case that *á:re'* forces a repetitive reading; this reading is a high scope repetitive reading. In a context where a subjectless repetitive reading is available without *á:re'*, its presence demands a repetitive reading in which the subject is included in the presupposition, as demonstrated in (22).

(22) Context: Mary kicked the ball. Then…
a. Kó:r sa-ha-rashéntho-'.
Paul REP.FACT-MsgA-kick-PUNC
'Paul [kicked it] again.'
b. #**Á:re'** Kó:r sa-ha-rashéntho-'.
again Paul REP.FACT-MsgA-kick-PUNC
Cannot mean: 'Paul [kicked it] again.'
Can only mean: 'Again [Paul kicked it].'

With these empirical facts in mind, the following two sections argue for the benefits of explaining said facts under a structural analysis, providing a natural and unified account of otherwise surprising phenomena.

4. Two *again* morphemes under a structural analysis

This section attempts to account for the co-occurrence, and resulting interpretational effects, of Kanien'kéha's two *again* morphemes under both structural and lexical analyses. Crucially, as shown in section 3.3, the occurrence of the second *again* morpheme *á:re'* forces a *high scope repetitive* reading in all contexts. Section 4.1 argues that this phenomenon is relatively straightforward to explain under a structural account where the two morphemes are elements in an operator-particle construction (in the spirit of (Lee, 2005; Quek and Hirsch, 2017; Sun, 2021)). Section 4.2 then attempts to explain the same facts under a lexical account, showing that such an approach is considerably more complex and struggles to predict the role of *á:re'* in *again* clauses.

4.1. *á:re'* under a structural approach

Accounting for the *á:re'* data within a structural analysis is relatively straightforward. Within this framework, the presence of *á:re'* always indicates a high adjunction site, giving rise to full sentence repetitive readings, while its absence indicates a lower adjunction site, allowing for lower scope interpretations such as subjectless repetitive and restitutive readings. To account for the importance of scope and the doubling of 'again' morphemes, I propose an operator-particle analysis of Kanien'kéha repetitive *again* in line with similar analyses of 'only' doubling (Lee, 2005; Quek and Hirsch, 2017; Sun, 2021). Under this analysis, originally proposed in Myers (to appear), I take *á:re'* to be the overt realization of a repetitive operator and the repetitive prefix *s-* to be a semantically vacuous concord marker which establishes a syntactic dependency with this operator. Based on this relation, the repetitive prefix is realized any time that the repetitive operator is present in the clause, explaining the co-occurrence facts.[5] This is represented in (23) where the presence of a repetitive operator, spelled out as *á:re'*, triggers the realization of the repetitive prefix *s-* in its canonical position as a pre-pronominal prefix. Though this representation shows the operator adjoining above the subject, I take that its presence anywhere in the clause triggers a co-occurring *s-* prefix.

(23) [REP-Operator [REP-Prefix [I swam]]]
á:re' s-

Crucially, there are contexts where the repetitive prefix *s-* can appear on its own, without *á:re'*. In line with other operator-particle accounts, I take that the Kanien'kéha repetitive operator can be null or realized as *á:re'*. In either case, the repetitive prefix must still occur, as seen in (24).

(24) (**Á:re'**) **s**-k-atáwen-s.
again REP-1sgA-swim-HAB
'I'm swimming again.'

With this proposal in mind, let's revisit the examples in (21). As the analysis predicts, the realization of *á:re'* (21b) indicates that the repetitive operator is adjoining high and therefore

[5] A number of options have been proposed for the exact mechanism behind this doubling, including Agree (Quek and Hirsch, 2017), covert movement (Lee, 2005) and overt movement (Sun, 2021). I do not take a stance on the specific mechanism at play in Kanien'kéha as the exact mechanics are not essential to the current discussion.

forces a high scope *repetitive* reading. When *á:re'* is absent (21a), this indicates that the repetitive operator is either high but null, supporting a repetitive reading, or low and null, supporting a restitutive reading.

The same distinction between adjunction sites explains the effect of *á:re'* on ambiguity *within* repetitive readings. As in (22), the overt realization of *á:re'* indicates that the repetitive operator is high, above the external argument, while its absence leaves room for scopal ambiguity, allowing for a lower-scope subjectless reading. In this way, the distinction between the presence and absence of *á:re* mirrors scope effects seen with left- vs. right-adjoining *again* in English which have also been used to justify a structural approach (see, e.g., Morgan 1969; McCawley 1976; Beck and Johnson 2004; Bale 2007).

In addition to evidence of scope effects with the presence/absence of *á:re'*, Kanien'kéha also displays scope effects related to the relative word order of *á:re'* and adjuncts, supporting a structural analysis. This section builds off of related arguments for syntax-sensitivity with English *again* which also exhibits scope effects based on the position of *again* in relation to other elements (again, see, e.g., Beck and Johnson 2004; Bale 2007).

In English, when *again* is left-adjoining, its presupposition includes all elements in the sentence to its right; when it is right-adjoining, the presupposition can include either the full sentence or a smaller scope. This distinction is easily seen in sentences with negation. When *again* is sentence-initial, its presupposition *must* include the negation, as in (25a), but when *again* is sentence-final, the presupposition can scope above or below the negation, as in (25b).

(25) a. Again [Esme didn't hit Harry].
b. [Esme didn't [hit Harry]] again. (Modified from Bale 2007: 459)

In Kanien'kéha, a similar phenomenon occurs when examining the relative word order of *á:re'* and adverbial adjuncts. Specifically, an adjunct is only included in the scope of a repetitive presupposition if *á:re'*adjoins to its left. When *á:re'* appears before the adjunct, the adverbial must be included in the presupposition introduced; when the adjunct appears *before á:re'*, it is not included in the presupposition. This is illustrated in (26) and (27) with both temporal and manner adjuncts, respectively, where the sentences in (a) function as co-text for the sentences in (b) and (c). When *á:re'* appears before the adjunct (underlined), as in (26b) and (27b), the repetitive operator scopes above the adjunct and the adjunct must be included in the presupposition. On the other hand, when this order is reversed and *á:re'* appears after the adjunct, as in (26c) and (27c), the repetitive operator scopes below the adjunct and the adjunct cannot appear in the presupposition.

(26) Context: Mary is a basket maker. She makes one basket each day.
a. Thetèn:re ohronkè:ne wa'-on-'ther-ón:ni-'…
yesterday in.the.morning FACT-FI.A-basket-make-PUNC
'Yesterday she made a basket in the morning…'
b. #Sok òn:wa **á:re'** iotohétston néntie sa-ion-'ther-ón:ni-'.
then today again afternoon REP.FACT-FI.A-basket-make-PUNC
Intended: 'Then today in the afternoon, [she made a basket] again.'
Can only mean: 'Then today, again [she made a basket in the afternoon].'

c. Sok òn:wa iotohétston néntie **á:re'** sa-ion-'ther-ón:ni-'.
then today afternoon again REP.FACT-FI.A-basket-make-PUNC
'Then today in the afternoon, [she made a basket] again.

(27) Context: for my New Year's resolution, I said I would swim once every day.
a. Tiotenhniseratierénhton iohsnóre wa'-k-atá:wen-'...
the.first.day fast FACT-1sgA-swim-PUNC
'The first day, I swam fast...'
b. #Sok tewenhniserakéhaton **á:re'** skena'shòn:'a sa-k-atá:wen-'.
then the.second.day again slow REP.FACT-1sgA-swim-PUNC
Intended: Then the second day, [I swam] again slowly.'
Can only mean: 'The second day, again [I swam slowly].'
c. Sok tewenhniserakéhaton skena'shòn:'a **á:re'** sa-k-atá:wen-'.
then the.second.day slow again REP.FACT-1sgA-swim-PUNC
'Then the second day, [I swam] again slowly.'

Assuming that the relative word order of *á:re'* and adjuncts reflect their adjunction sites in the syntax, the scope effects displayed here present additional evidence that a structural analysis is on the right track. In sum, a structural analysis of the two *again* morphemes in Kanien'kéha clearly and naturally accounts for their distribution and resulting readings.

4.2. *á:re'* under a lexical approach

The *á:re'* data are much harder to account for under a lexical approach where *again* is assumed to adjoin at the same level for both repetitive and restitutive readings. The primary challenge of a lexical approach is explaining how the presence of *á:re'* affects the availability of readings. If we combine the operator-particle analysis with a lexical approach, we might expect that the overt realization of *á:re'*, the operator, would allow for a high scope repetitive or counterdirectional reading, depending on which lexical entry of *again* is in use. However, as seen in (28), this is not the case. The presence of *á:re'* is infelicitous in a context supporting a counterdirectional reading.

(28) Context: Mary called me yesterday. Today...
#**Á:re'** i-onsa-khe-iatewennáta'a-hs-e'.
again TRANS-**REP**.FACT-1sg<FI-call-BEN-PUNC
Cannot mean: 'I called her back.' (Counterdirectional)
Can only mean: 'Again, I called her.' (Repetitive)

Alternately, we could posit that there are two different operators – a low, null polysemous operator and a high, overt repetitive operator – both of which trigger concord *s-* on the verb. However, beyond its relative complexity, this proposal struggles to explain why sentences without *á:re'* can have the same readings as sentences with *á:re'*, as in (24). If the operators were restricted to different adjunction sites, we wouldn't expect any overlap and resultant ambiguity.

Leaving the operator-particle approach behind, another possible way to account for these data

lexically is to assume that *á:re* is not an *again*-type element but instead some morpheme that helps disambiguate readings. After all, this is apparently its function; *á:re'* appears to focus a high scope repetitive reading. Such an implication is not wholly new. Past work has argued that focus can play such a role with *again* ambiguity (Beck, 2006; Patel-Grosz and Beck, 2019). These accounts propose that focus on the *again* element disambiguates in favor of the repetitive reading while focus on the predicate (Beck, 2006) or marking *again* as a contrastive topic (Patel-Grosz and Beck, 2019) disambiguates in favor of the restitutive reading. Applying this to Kanien'kéha, we could imagine that *á:re'* is the realization of *again* in a focus position, forcing a repetitive reading.

However, there is no evidence that this is how focus works in Kanien'kéha. Kanien'kéha information structure is expressed almost exclusively via word order with one position at the far left used for both focus and topic (DeCaire et al., 2017; Flaim, 2025). Any element of the sentence – predicate, argument, adverb, etc. – can appear in this position to indicate focus/topic. Crucially, in sentences with *á:re'*, no matter what element appears in the focus/topic position, only the high scope repetitive reading is available. As shown in (29), information structure has no effect on disambiguating readings with *á:re'*, casting doubt on an alternate analysis of *á:re'* as a focus-based disambiguator.

(29) a. **Á:re'** sa-hí:i-on-' ne iontkahri:tha'.
again REP.FACT-1sg<Msg-give-PUNC NE toy
'Again, I gave Otto a toy.'
Cannot mean: I gave him back a toy. (*Á:re'* first)

b. Sa-hí:i-on-' ne iontkahri:tha' **á:re'**.
REP.FACT-1sg<Msg-give-PUNC NE toy **again**
'Again, I gave Otto a toy.'
Cannot mean: I gave him back a toy. (Verb first)

c. Iontkahri:tha' **á:re'** sa-hí:i-on-'.
toy **again** REP.FACT-1sg<Msg-give-PUNC
'Again, I gave Otto a toy.'
Cannot mean: I gave him back a toy. (Argument first)

In sum, attempts to account for the *á:re'* data with a lexical analysis of Kanien'kéha's *again* ambiguity are considerably challenging. In contrast, the apparent scope effects of *á:re'* are readily predicted by a structural account in which syntactic structure determines the range of readings available.

5. Objectless repetitive and counterdirectional readings under a structural analysis

Having made the case that a structural analysis most naturally explains the Kanien'kéha facts concerning the two *again* morphemes, this section extends such an analysis to account for the full range of *again* readings available in the language. As seen in section 2.1, the traditional structural approach already gives us both standard repetitive and restitutive readings. However, such accounts have not used it to explain objectless repetitive and counterdirectional readings. In the spirit of past work using the presence of subjectless repetitive presuppositions in En-

glish to support claims that the external argument (or subject) is syntactically severed from the verb (Bale, 2007; Smith and Yu, 2021; Asami and Bruening, 2025), this section argues that the presence of objectless repetitive presuppositions in Kanien'kéha supports claims that the *internal* argument (or object) is also severed, following Schein (1993), Champollion (2010), and Lohndal (2012), among others. Crucially, accepting this claim allows the repetitive operator to modify the verb/root directly, resulting in a repetitive presupposition which necessarily lacks any arguments. With this in place, both objectless repetitive and counterdirectional readings fall out naturally from a structural approach with only one lexical entry for *again*.

To illustrate this, section 5.1 presents a structural analysis of objectless repetitive readings, in which the severing of all arguments allows the repetitive operator to modify the verb alone and contribute an objectless repetitive presupposition. Then, section 5.2 extends this account to counterdirectional readings, showing that a single repetitive *again* can even account for these as long as we sever internal arguments.

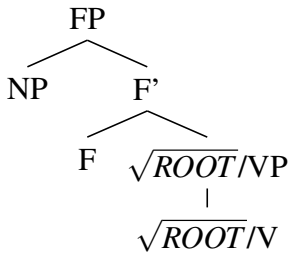
5.1. Objectless repetitive readings and severing the internal argument

Much work has used the availability of subjectless repetitive readings of *again* as evidence that the external argument is syntactically severed from the verb (see, e.g., Bale 2007; Smith and Yu 2021; Asami and Bruening 2025). Taking our semantics for repetitive *again* as a modifier of properties of events, the existence of subjectless repetitive presuppositions indicates the existence of a level of the derivation below the external argument and above the verb that is a property of events. This is exactly what is predicted by the argument structure of Kratzer (1996) where the VP is of type $\langle v,t\rangle$ and then Voice introduces the external arguments via Event Identification, resulting again in a projection of type $\langle v,t\rangle$.

However, this syntax presents a complication for deriving objectless repetitive readings under a structural approach. The proposed semantics of $again_{\text{REP}}$ suggest that the availability of objectless repetitive presuppositions belies the existence of an adjunction site of type $\langle v,t\rangle$ located *below* the internal argument and *above* the verb. However, if we follow Kratzer (1996), such a site simply does not exist.

To circumvent this issue, I propose an alternative argument structure in which the verb/root itself is of necessary semantic type for *again* modification. Specifically, I argue for the severing of the internal argument from the verb (in line with Schein (1993), Champollion (2010), and Lohndal (2012), among others). Under this approach, I take the verb to be a bare predicate of events, as formalized in (30a) for the verb 'eat'. All arguments are then related to the verb via thematic roles introduced by functional projections, as demonstrated in (30b).

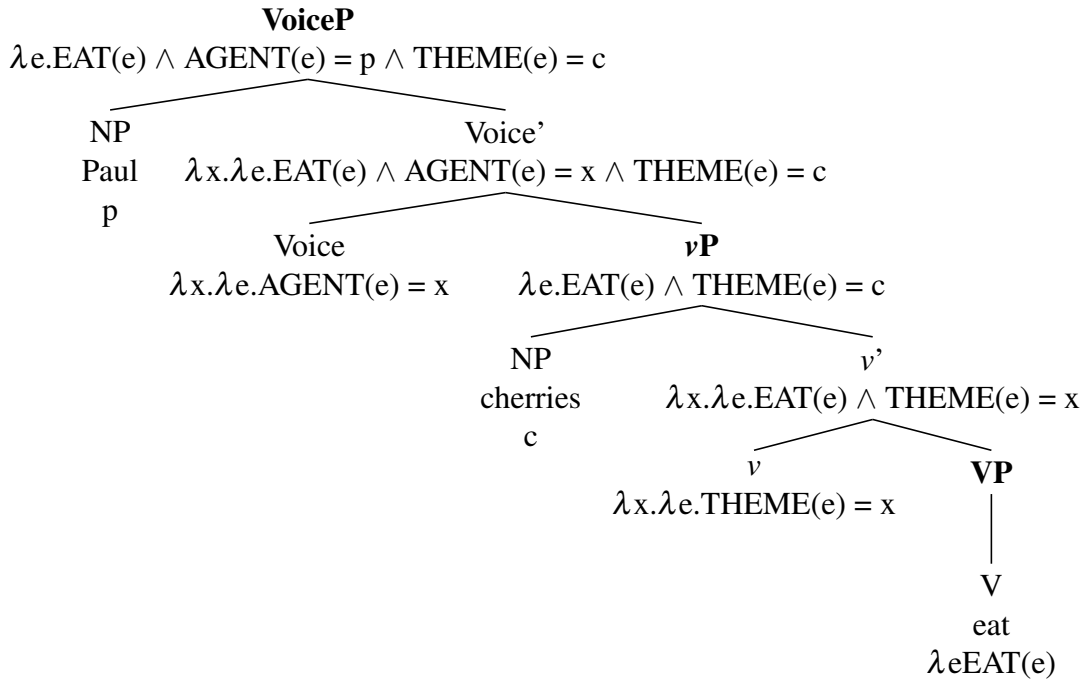
(30) a. Semantics of the verb/root
$[\![EAT]\!] = \lambda e\text{EAT}(e)$
b. Introducing arguments



With these semantics, a repetitive operator can modify the verb directly to create objectless presuppositions. An example of a sentence with the full array for available repetitive presuppositions is given in ; the proposed structure underlying this is given in (32) with each possible adjunction site in bold. To distinguish between functional projections, I have assumed that Voice relates an event to an agent and little *v* an event to a theme (as is widely proposed) but the exact head which introduces each argument is not critically important.[6]

(31) Kó:r é:ri sà:-ra-k-e'.
Paul cherry REP.FACT-eat-PUNC
'[Paul ate cherries] again.' (Adjunction above the external argument)
'Paul [ate cherries] again.' (Adjunction above the internal argument)
'Paul [ate] cherries again.' (Adjunction above the verb)

(32) Introducing arguments independently



While the above structural analysis gets us the predicted results, it is not the only possible way to derive objectless repetitive readings. One principal alternative comes from the lexical approach. Specifically, we could posit an additional lexical entry for *again* which gives rise to objectless repetitive presuppositions. In the same way that counterdirectional *again* relies

[6]While the sentence exemplified here is a transitive, I assume that both Voice and *v* can also pass up their complements without introducing an argument to form passives and unergatives, respectively.

on the presupposition of a reverse event, this operator would contribute a presupposition of an event with the same event kind, but different arguments. No matter how this operator works, however, it has to make some assumptions about structure in order to pick out just an event kind (or the event description of the verb) without including arguments. As such, this approach is primarily just reformulating the work of the structural approach's syntax within the proposed semantics of the operator, with no larger benefit; the distinction is arbitrary. What's more, the need for this additional lexical entry would be typologically unproductive. To my knowledge, Iroquoian languages are the only languages in the world where these specific repetitive presuppositions have been documented. Based on these reasons, I argue once again that the above structural approach is more suitable in providing a natural analysis for the Kanien'kéha data.

5.2. Counterdirectional readings

Under a lexical analysis, counterdirectional *again* is needed for restitutive and counterdirectional readings. Having argued already that Kanien'kéha's restitutive readings are better accounted for with a low-scoping repetitive operator, this leaves just Kanien'kéha's counterdirectional readings to explain. Typically, in languages which use the same morpheme for both repetitive and counterdirectional readings, a polysemous *again* is needed to derive both interpretations. However, building on the claim that all arguments are severed syntactically from the verb, I argue that we can also do away with a counterdirectional *again*, using just the one repetitive operator to explain counterdirectional readings as well.

Counterdirectional readings are said to arise as the result of the presupposition that the reverse of the asserted event occurred before. However, in most (if not all) cases, the reverse event is equivalent to the asserted event but with its arguments inverted. In other words, the event description of the verb is the same between the presupposed and asserted event. This is the same underlying intuition supporting objectless repetitive presuppositions. The only difference is that with objectless readings, the arguments can change freely between presupposition and assertion while with counterdirectional readings, they must be the same two arguments but in reverse. Based on this, I argue that apparent counterdirectional readings in Kanien'kéha are really just additional examples of objectless repetitive readings, albeit with specific co-texts which coerce a counterdirectional interpretation. This intuition is spelled out further in (33) which shows one sentence that can be interpreted with the full range of repetitive readings as well as a counterdirectional reading.

(33) Rón:kwe **sa**-hii-aterennaién:-hahse-'.
man **REP**.FACT-1sg<3sg-pray-BEN-PUNC
'I prayed for the man AGAIN.'
a. Repetitive (highest scope): 'Again, I prayed for the man.'
b. Repetitive (subjectless): 'The man was prayed for again, this time by me.'
c. Repetitive (objectless): 'Praying happened again, this time by me for the man.'
d. Counterdirectional: 'I prayed for the man in return (and he prayed for me first).'

In this way, the ambiguity between repetitive readings and counterdirectional readings in Kanien'kéha is predicted by the same underlying assumptions as the ambiguity between different repetitive readings (subjectless, objectless, etc.), facilitating a single unified structural account of all *again*

readings in the language.

6. Conclusion

In this paper, I examined the unexpected range of *again* readings in Kanien'kéha in light of past analyses of *again* ambiguity across the world's languages. Notably, unlike previously analyzed languages, Kanien'kéha possesses an unexpected objectless repetitive reading and two, co-occurring *again* morphemes, providing a welcome opportunity to test past theoretical approaches on novel empirical data. Ultimately, based on the presence of scope effects among Kanien'kéha's two *again* morphemes and the arbitrary nature of lexical attempts to derive objectless repetitive readings, I argued in favor of a structural analysis, in which all of Kanien'kéha's many *again* readings are derived from the same repetitive operator, over a lexical analysis, in which multiple lexical entries for *again* would be required. In taking up a structural analysis, I also argued for the severing of the internal argument in order to facilitate the derivation of both objectless repetitive and counterdirectional presuppositions. This proposal has implications for the theoretical understanding of argument structure and verbal semantics. In taking up an analysis of the verb/root as a bare event predicate, this paper raises a major question about the universality of argument structure across languages. While no easy answer to this question exists, the arguments of this paper attempt to support the case for severing the internal argument cross-linguistically, placing the onus of cross-linguistic variation in repetitive presuppositions on the event modifier and not the verb.

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