Stowaway themes: Incorporation, possession, and nPs in Kanien'kéha*

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1 Introduction

Noun incorporation is an oft-cited hallmark of so-called "polysynthetic" languages (Drossard, 1997; Fortescue et al., 2017; Mithun, 1988; going back to at least Von Humboldt, 1836); Fortescue (2017) even includes it as an integral part of his definition of polysynthesis: polysynthetic languages must allow "more than one lexically 'heavy' morpheme within the holophrastic verb" (122). Some of the common poster children of both noun incorporation and polysynthesis are the Northern Iroquoian languages (Baker, 1988; Mattissen, 2004; Mithun, 1984; Woodbury, 1975). As in (1), noun incorporation is highly productive in Kanien'kéha (Mohawk; Northern Iroquoian).[1] However, incorporation clauses (2a) almost always have a non-incorporated variant, also called an "excorporated" variant (2b) (DeCaire et al., 2017; I use "incorporation" and "excorporation" terms in an analytically neutral way).[2]

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[1]Glossing follows standard Leipzig conventions with the following additions and alterations: A = agent set, ASSERT = assertional particle, C = complementizer, CIS = cislocative, COIN = coincident, CONT = continuative, CONTR = contrastive, DIM = diminutive, DIST = distributive, DUP = duplicative, EMPH = emphatic, EP = epenthetic vowel, FACT = factual, FI = feminine-indefinite, FOR.PST = former past, FV = final vowel, FZ = feminine-zoic, HAB = habitual, INCH = inchoative, INSTR = instrumental, INT = intensifier, JR = joiner, NSF = noun suffix, ONOM = onomatopoeia, OPT = optative, P = patient set, PART = partitive, PRO = (free-standing) pronoun, PROSP = prospective, PRT = particle, PUNC = punctual, PURP = purposive, REM.PST = remote past, REP = repetitive, REV = reversative, SRFL = semireflexive, STAT = stative, TRANS = translocative. Portmanteau prefixes are glossed X>Y, with X reflecting the features of the higher argument and Y reflecting the features of the lower argument. Note that N and FI arguments are never glossed with number as they do not make number distinctions. Examples from sources are updated to the modern orthography, and glosses are updated for consistency. Translations from Williams, 1976 are updated to more closely match the Kanien'kéha.

[2]This holds for the vast majority of verbs. This is not true of certain stative-only verbs and certain verbs that never incorporate, but I leave an analysis of these for future work.

(1) *Wahèn:ron'*   *ne rokstén:ha*   *"Thí kawenní:io',*   *entà:'on*
     wa'-hen-ihron-'   ne ro-kstenha   thi ka-wenn-iio   en-ta'on
     FACT-MsGA-say-PUNC NE MsGP-old.person   that NA-word-good[STAT] FUT-have.to
     ki' niáhkwe' enhsahiákha'   *tánon'*
     ki' niahkwe' en-hs-**ahi**-a-kw-h-a'   tanon'
     before.that   FUT-2SGA-fruit-JR-pick-PURP-PUNC and

     enhsanitsatorátha'   *tánon' kèn:'en nentéhshawe'."*
     en-hs-an-**its**-atorat-h-a'   tanon' ken'en n-en-te-hs-hawe-'
     FUT-2SGA-SRFL-fish-hunt-PURP-PUNC and   here   PART-FUT-CIS-2SGA-hold-PUNC
     'The old man said, "First, you must go pick some berries and go catch some fish and bring
     them here."'   (Jacobs, 1976a, K.)

(2) a. *Incorporation*   b. *Excorporation*
        Wa'khahseró:roke'.   *Wa'kehrhó:roke'*   *ne oháhsera'.*
        wa'-k-hahser-orok-e'   wa'-ke-**hrh**-orok-e'   ne **o**-hahser-**a'**
        FACT-1SGA-light-cover-PUNC   FACT-1SGA-thing-cover-PUNC NE NP-light-NSF
        'I covered the/a lamp.'   'I covered the/a lamp.'   (McDonald, 2023)

Noun incorporation has been the subject of much previous debate crosslinguistically (e.g., Dayal, 2011 on Hindi, Massam, 2001 on Niuean, Bittner, 1994 and Van Geenhoven, 1998 on Kalaallisut, Baker, Aranovich, et al., 2005 on Mapudungun, among many others) as well as specifically within Kanien'kéha (Baker, 1988, 1996; DeCaire et al., 2017; Mithun, 1984; Renard, 2023). Previous work on Kanien'kéha (Baker, 1988, 1996) has described noun incorporation as optional in the environments where it appears. This line of work presumes the forms in (2) to be semantically equivalent and takes the incorporated structure in (2a) to be derived from the excorporated one in (2b). Specifically, this work proposes that incorporation is the movement of an external nominal into the verbal complex.

More recent work (DeCaire et al., 2017; Renard, 2023) has turned this assumption on its head. These authors argue that, while incorporated (2a) and excorporated (2b) may be truth-functionally equivalent, they are not entirely equivalent. They show that excorporated themes only occur due to focus of the theme or of the verb. In other words, incorporation is the default form, and all excorporated material carries information structural requirements. They suggest, in direct contrast to the incorporation movement proposed by Baker (1988, 1996), that the excorporated form in (2b) is derived from the incorporated form in (2a): the incorporated noun is generated inside of the verbal complex and excorporation is movement of this nominal out of it.

Both of these proposals appeal to a derivational relationship between the alternating forms in (2). However, the question of whether there is a derivational relationship between these forms is complicated by two points. First, in (2a), the root *hahser* 'light' is incorporated into the verb *orok* 'cover'. However, in the excorporated version (2b), the nominal root *hahser* appears with additional morphology: a neuter agreement prefix *o-* and a noun suffix *-a'*. Second, the verb stem has also gained material in the absence of an incorporated root; *hrh*, glossed as 'thing', now appears before the verb root *orok*.

These open questions are the point of entry for my inquiry. In this work, I argue against a derivational link between incorporation and excorporation forms in Kanien'kéha. Specifically, I will propose that incorporated roots are true themes, generated as the roots of nP complements to

V. On the other hand, what appears to be an excorporated theme is instead the possessor of an inalienably-possessed root. The structures I will propose for the incorporated and excorporated variants are below; heads marked with subscript Ⓦ (for "word") form a morphological word together.

(3)   *Incorporated variant = (2a)*
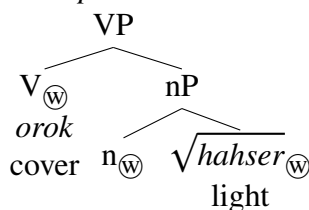
(4)   *Excorporated variant = (2b)*
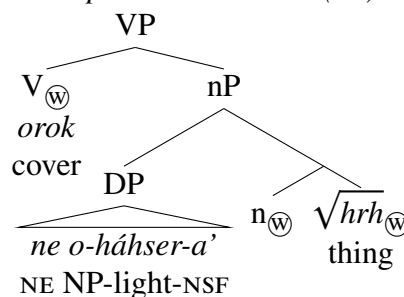
I will argue that this account is able to predict more of the data when compared to analyses proposing derivational relationships between incorporated and excorporated variants. Additionally, I will show that my proposal reduces incorporation phenomena to one independent stipulation: that V must merge with nPs in Kanien'kéha. Specifically, I will argue that of the apparent "themes" in Kanien'kéha, only incorporated neuters are generated as the theme complements of V. The rest of the apparent "theme" nominals, on the right in (5), must all be stowed away as the inalienable possessors of a true theme.

(5)

Generated as a theme	Stowed away as a theme's (inalienable) possessor
Incorporated neuter nominals	Freestanding neuter nominals
	Proper names
	Animate nominals
	Pronouns (including *pros*)
	Alienably-possessed nominals
	Focused nominals
	Nominals with demonstratives

In other words, I will propose that the structure of excorporated variants is exactly the structure of possessor raising constructions in the language, where the excorporated nominal serves as the inalienable possessor of a dummy theme root. I will argue that this is due to the fact that all the nominals on the right in (5) involve structure larger than nP and therefore cannot merge as the complement of V. The rest of the data will follow via machinery of word-building, possession, and semantics that has been independently proposed and supported by data both internal and external to Kanien'kéha. This aligns with one of the main goals of this work; it reduces Kanien'kéha noun incorporation to common crosslinguistic properties. In addition to the theoretical consequences discussed in the remainder of this work, I hope that the de-exoticization of noun incorporation (as compared to previous works) may be encouraging to those working hard to reclaim their language (e.g., DeCaire, 2023; Stacey, 2016; see also Appendices A and B).

The rest of this work is structured as follows. Section 2 covers background in many areas. It begins with a discussion of methodology before turning to more general background on Kanien'kéha,

its basic properties, its verbs, and its agreement patterns. Section 3 discusses the structure of incorporated nominals. I will argue on morphological and semantic grounds that incorporated nouns have the hallmarks of nPs. I delve into complex word-building in Section 4. Based on Mirror Principle effects (Baker, 1985) and phonological evidence, I suggest that noun incorporation is a reflex of a more general word-building mechanism and that this results in its default nature. I do not adopt one particular proposal of word-building, noting that the data can be adequately captured by multiple recent proposals on word formation. The true meat of my proposal is Section 5. I first motivate the structure of possessor raising and note that the proposed structure provides all the tools to account for excorporated variants. I then directly apply it to excorporation and detail how it can account for the phenomena. Lastly, I extend the proposed analysis to account for animacy restrictions on incorporated nouns. Having detailed my proposal in Section 5, I discuss some of its consequences in Section 6. Specifically looking at possession, I discuss how the analysis correctly predicts the inability of alienably possessed nouns to be externally possessed, as well as some of the verbal behavior occurring alongside alienable possession. I spend the rest of Section 6 determining the structure of non-incorporated inalienable possession. Section 7 summarizes the main points of the proposal and concludes.

2 Background

This section covers general background for the remainder of this work, methodological, theoretical, and language-specific. §2.1 discusses methodological considerations, specifically how the data in this work was collected. §2.2 covers basic properties of Kanien'kéha to orient the reader for the rest of the work, with specific focus on agreement and the verbal domain.

2.1 Methodological considerations

The data comes from two main sources: previously published materials and my own fieldwork. All data from previously published materials is cited as such. Previously published data comes from both academic materials and *Kanien'kéha okara'shòn:'a*, a collection of stories written by first-language speakers (Williams, 1976). All data from the collection of stories is cited by storyteller, rather than by the editor of the collection. Since all judgments from my fieldwork are in the Ahkwesáhsne dialect, all unmarked data is from this dialect. Data from other dialects is noted after its source; K. marks examples from the Kahnawà:ke dialect.

Data from my personal fieldwork is cited as McDonald, 2023. I conducted fieldwork with Mary Onwá:ri "Wári" Tekahawáhkwen McDonald, an L1 speaker from Ahkwesáhsne. I additionally had three elicitation sessions with Akwiratékha' Martin, an advanced L2 speaker from Kahnawà:ke. Fieldwork sessions took place both at the Linguistics Department of McGill University, as well as at Wári's home in Ahkwesáhsne. Fieldwork sessions lasted from half an hour to an hour once or twice a week from September 2023 until April 2024. Data from fieldwork appearing here is from Wári; sessions with Akwiratékha' were designed to create forms to test with Wári. Another advanced L2 speaker, Wíshe Mittelstaedt, often attended elicitations with Wári. All elicited data take the form of translations, grammaticality judgments, felicity judgments, or corrections provided by Wári. Translations were elicited without context and were used to provide me with unknown vocabulary items that I wanted to use in later judgment tasks. Grammaticality judgments were elicited with

or without context. Felicity judgments were always elicited with contexts. For judgments elicited with a context, the context will be provided in the example (Matthewson, 2004).

There were four methods for providing context. The first was providing a context in the metalanguage (English) before asking for a judgment on a constructed sentence in Kanien'kéha. The second was more involved. First, I would set a minimal context in English. Next, I would ask Wári to translate two or three more context setting sentences into Kanien'kéha. I would then read these Kanien'kéha contextual sentences together followed by a target sentence I constructed in Kanien'kéha before asking for a judgment on the target sentence. The third method involved constructing a sentence for a grammaticality judgment, before following this sentence up with another constructed sentence intended to cancel an implicature. I then asked for a felicity judgment on this second sentence. The last method for setting context involved a storyboard. The storyboard was only used once to elicit judgments on alienable and inalienable possession. The storyboard involved a lizard in multiple scenarios, for example, sleeping, resting on a branch, etc. The focus of the storyboard was the lizard's tail, which fell off the branch, fell off (i.e., separated from its body), fell and hit a vase, etc. Each scenario involved two to three panels.

Judgments elicited from my fieldwork that matched previous data in the literature were not retested. However, all judgments which contradicted previous literature or on which previous literature was silent were retested for internal consistency. I now turn from methodological details to background on Kanien'kéha.

2.2   Basic background on Kanien'kéha

Kanien'kéha is a Northern Iroquoian language in the Five Nations branch, along with closely-related Onʌyoteʔa·ká· (Oneida), Onųdaʔgeháʔ (Onondaga), Gayogoho:nǫʔ (Cayuga), and Onödowá'ga:' (Seneca) (Mithun, 2017). It is the language of the Kanien'kehá:ka people, whose traditional lands are situated in the areas now known as Upstate New York and Southern Québec. The Kanien'kehá:ka currently live in six communities in Upstate New York, Southern Ontario, and Southern Québec (Mithun, 2017). Kanien'kéha is considered definitely endangered by UNESCO's *Atlas of the world's languages in danger* (Moseley, 2010), with around 500 L1 speakers, the vast majority of which are elders (DeCaire, forthcoming).

The precarity of the Kanien'kéha language is largely due to the violent impacts of Indian day schools, residential schools, and modernization. For example, by 1950, most families in Kahnawà:ke were not raising their children speaking Kanien'kéha (Stacey, 2016). Language revitalization efforts began in the 1970s, beginning with elementary immersion programs and expanding into adult immersion and language classes in the 1990s. The Mohawk Language Standardization Project in 1993 brought together members from multiple Kanien'kéha communities to standardize the language, increasing interest in revitalization programs. Today, immersion for both children and adults remain active in multiple communities (Stacey, 2016). Multiple community scholars have advocated for and emphasized the necessity of adult immersion programs and advanced speaker resources in order to reestablish intergenerational transmission of Kanien'kéha within the household (DeCaire, 2023; Stacey, 2016).

Kanien'kéha, like other Iroquoian languages, is "polysynthetic" and highly agglutinating (though with some fusion in the pre-pronominal prefixal domain; see Martin, 2023). Kanien'kéha is also

robustly *pro*-drop (6).[3] Furthermore, it exhibits fairly "free" word order (7), though it may be better described as discourse-configurational (see, e.g., Kiss, 1995; Mithun, 2020).

(6) *Robust* pro-*drop*
   Wa'thá:ta'ne'   *wà:rehre'*   *enhoia'títa'*.
   wa'-t-ha-t-a-'n-e'   wa'-hr-ehr-e'   en-ho-ia't-ita'
   FACT-DUP-MSGA-stand-JR-INCH-PUNC FACT-MSGA-think-PUNC FUT-MSG>MSG-body-in
   'He stopped and thought he would give him a ride.'   (Lazore, 1976a, K.)

(7) *"Free" word order*
   a. *Sá:k ranòn:we's   akotià:tawi.*
      Sak ra-nonhwe'-s   ako-atia'tawi
      Sak MSGA-like-HAB FIP-dress
      'Sak likes her dress.'
   b. *Ranòn:we's Sá:k akotià:tawi.*
   c. *Sá:k akotià:tawi ranòn:we's.*
   d. *Ranòn:we's akotià:tawi ne Sá:k.*
   e. *Akotià:tawi ranòn:we's ne Sá:k.*
   f. *Akotià:tawi Sá:k ranòn:we's.*   (Baker, 1996:10, K.)

There are at least three apparent parts of speech in Northern Iroquoian languages: verbs, nouns, and particles (Michelson, 2023). Particles are generally uninflected and cover a range of discourse functions; they are not be covered with any length in this work. The reader is referred to discussion in Michelson, 2023 for more details. Nouns and nominal morphology will be detailed throughout. The Kanien'kéha verb is the most prevalent part of speech and thus will be generally described here.

The verb is templatic and consists of four main pieces: pre-pronominal prefixes, pronominal prefixes, the verb stem, and aspectual suffixes (Bonvillain, 1973; Lounsbury, 1953; Michelson, 2016; Mithun, 2017), as schematized in (8).

(8) *Verb template (based on Michelson, 2016 and Mithun, 2017)*
   pre-prenominal prefixes—pronominal prefixes—stem—aspectual suffixes

Pre-pronominal prefixes include prefixes indicating modality, negation, direction/location, and repetition (Mithun, 2017), and often form fusional combinations (see Martin, 2023). The verb stem (9) contains minimally the verbal root, but may be internally complex (Michelson, 2023; Mithun, 2017).

(9) *Verbal stem template (Michelson, 2023; Mithun, 2017)*
   SRFL/REFL – incorporated noun – verb root – derivational suffixes

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[3]Some (e.g., Jelinek, 1984; Koenig and Michelson, 2015) argue that the arguments are the agreement prefixes on the verbs and thus Kanien'kéha does not technically display *pro*-drop; the descriptive generalization is that overt nominal arguments are not required.

It may additionally contain a reflexive/semi-reflexive marker and an incorporated noun root (with or without a nominalizer) to the left of the verb root, as well as one or more derivational suffixes. Additionally, morphemes within the verb stem may require a "joiner" or "linker" vowel to combine, glossed as JR.

There are three basic aspectual suffixes: the stative, the habitual, and the punctual, all with multiple allomorphs. These broadly correspond to stative/perfect, imperfective, and perfective categories, respectively. These may occur with a further "extended aspect" suffix, such as the "former past" *-kwe'* (Bonvillain, 1973; Lounsbury, 1953). The minimal verb contains a verb root, a pronominal prefix, and an aspect suffix, as is shown in (10). Example (11) shows a complex verb, where the verb stem is bracketed.

(10) *Minimal verb*
      Wákien'.
      wak-ien-'
      1sGP-have-STAT
      'I have it.'   (Mithun, 2009:568)

(11) *Complex verb*
      Sok né: ***wa'thonthehtakén:ni.***
      sok ne: wa'-t-hon-[at-heht-a-kenni]-'
      SO   ASSERT FACT-DUP-MplA-[SRFL-garden-JR-compete]-PUNC
      'So then they competed with their gardens.'   (Mithun, 2009:575)

Pronominal prefixes index the person, number, and gender features of verbal participants. Pronominal prefixes come in three sets: agent prefixes (also called "subjective"), patient prefixes (also called "objective"), and transitive prefixes. Transitive prefixes mark both arguments of a transitive verb, as well as the two highest arguments of a ditransitive. Transitive prefixes are often treated as portmanteaux, although some forms are fairly transparent combinations of both arguments (see Commanda, 2022 for a more in-depth proposal of how to build the pronominal prefixes).[4]

Kanien'kéha exhibits "split-S" ("active") agreement (Mithun, 1991); intransitive agreement appears as a prefix from either the agent set or the patient set of prefixes. The set used is entirely dependent on the verb as well as certain functional material (i.e., agreement is not freely chosen based on empathy or agentivity as in, e.g., Pomo; see Merlan, 1985 and Baker and Bobaljik, 2017). Agent prefixes generally mark the only argument of volitional events and inherent properties, while patient prefixes are generally used for non-volitional events and temporary states. However, most previous authors agree that there are exceptions and that for some verbs the agreement set must be lexically specified (Baker, 1996; Coon, 2023; Mithun, 1991). Baker (1996) shows that Kanien'kéha has syntactic unaccusative-unergative distinction; however, as shown in (12–13), the agreement set does not neatly cleave along this distinction.

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[4]When transparent, transitive prefixes always occur with the higher argument before the lower one. For example, *rak-* MsG>1sG is separable into a masculine component *ra-* and a first person component *k-*, with the higher masculine argument appearing before the lower first person argument (Bonvillain, 1973).

(12)   *Unaccusatives*

    a. *Agent set*
       Wahatotáhsi'.
       wa'-**h**-at-otahsi-'
       FACT-MSG**A**-SRFL-appear-PUNC
       'He appeared (i.e., out of nowhere).'

    b. *Patient set*
       Wahokè:tohte'.
       wa'-**ho**-ke'toht-e'
       FACT-MSG**P**-appear-PUNC
       'He appeared (i.e., showed up).'   (Baker, 1996:212, K.; trans. Coon, 2023:8)

(13)   *Unergatives*

    a. *Agent set*
       Wahátien'.
       wa'-**h**-at-ien-'
       FACT-MSG**A**-SRFL-lay-PUNC
       'He sat down.'   (Baker, 1996:213, K.)

    b. *Patient set*
       Wahoiéshon'.
       wa'-**ho**-ieshon-'
       FACT-MSG**P**-laugh-PUNC
       'He laughed.'   (Baker, 1996:212, K.)

Pronominal prefixes also make several person, number, and gender distinctions (Coon, 2023; Lounsbury, 1953; Michelson, 2016). First, second, and third persons, as well as clusivity for first person non-singulars, are distinguished, as well as singular, dual, and plural numbers. Third person nominals fall into four genders: masculine, feminine-indefinite, feminine-zoic, and neuter. Masculine prefixes refer to male individuals and groups including at least one male. The feminine-indefinite gender refers to singular females and generic/indefinite referents. The feminine-zoic is the gender of singular, dual, and plural female humans, as well as animals.[5] All inanimate nouns are classified as neuter. Forms marking feminine-zoic and neuter arguments are almost always syncretic as in (14), but a few forms distinguish the two (15).

(14)   a. *Kenòn:we's.*
       ke-nonhwe'-s
       1SG**A**-like-HAB
       'I like it(N).'

    b. *Kenòn:we's.*
       ke-nonhwe'-s
       1SG>FZSG-like-HAB
       'I like her/it(FZ).'   (Martin, 2023:3, K.)

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[5]The choice as to whether female humans should be referred to using feminine-indefinite or feminine-zoic forms is a complex issue, with heavy social implications. See discussion in Bonvillain, 1973 and Koenig and Michelson, 2015 for more detail.

(15) a. *Ienòn:we's.*
          ie-nonhwe'-s
          FIA-like-HAB
          'She likes it(N).'

      b. *Konwanòn:we's.*
          konwa-nonhwe'-s
          FI>FZSG-like-HAB
          'She likes her/it(FZ).'   (Baker, 1996:20, K.)

Both Koenig and Michelson (2015) and Coon (2023) refer to neuter as a formally unmarked gender. This can be seen in (16), where the prefix for a feminine-indefinite agent acting on a neuter patient is identical to the intransitive agent prefix for a feminine-indefinite referent.[6] I gloss both as feminine-indefinite agent prefixes following Coon (2023) and Koenig and Michelson (2015).

(16) a. *Ienòn:we's.*
          ie-nonhwe'-s
          FIA-like-HAB
          'She likes it.'

      b. *Iontá:wens.*
          ion-atawen-s
          FIA-swim-HAB
          'She swims.'   (Baker, 1996:204, K.)

With the above Kanien'kéha background in place, I now begin my proposal.

3   The identity of the complement of V

In this section I begin building my proposal, beginning with the structure of incorporated material. I first motivate my assumption that incorporated nouns are generated as the complements of V. I then turn to my proposal, arguing that incorporated material always expones a nP. I argue this first using morphological evidence, before examining the semantic evidence. I will show that incorporated nouns always contain very little morphology, maximally a root or VoiceP and a nominalizer morpheme. I will show that other nominal morphology is disallowed in incorporation and I will propose that this reflects the category of incorporated material. I will then foray into the semantics of the incorporated noun. I suggest due to animacy restrictions, incorporated nouns must contain less structure than PersP (or φP; Danon, 2006, 2011), before showing that my analysis is also compatible with the number neutrality of incorporated material. I then provide a brief semantic sketch to account for the discourse-referential and specific behavior of incorporated nouns. I suggest that instead of refuting my argument, these properties are expected to arise in my account from a combination of independently proposed semantic properties: the VP as the domain of existential closure (Diesing, 1992; Diesing and Jelinek, 1995) and the use of a covert iota operator for definite semantics in languages without determiners (Bošković, 2008; Little, 2020). In the last subsection, I summarize the general proposal.

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[6]Note that the *ion-* form of the feminine-indefinite agent prefix is regular allomorphy conditioned by verb stems beginning in *a*. See Martin, 2023 for all allomorphs of the pronominal prefixes.

3.1   Incorporated nouns are the complements of V

Noun incorporation (henceforth referred to as "incorporation" for brevity) is highly productive in Kanien'kéha, as in other Northern Iroquoian languages (see Lounsbury, 1949; Lukaniec, 2018; Michelson, 2016; Mithun, 1984, among others).[7] A basic example of incorporation is in (17).[8]

(17) *Sok   wa'thní:ien'   kwáh wahnihwistá:ren'.*
       sok   wa'-t-hni-ien-'   kwah wa'-hni-**hwist**-a-hr-en'
       so.then FACT-DUP-MDUA-lay-PUNC EMPH FACT-MDUA-money-set.on-PUNC
       'So then they two really put down money on it.'   (Jacobs, 1976b, K.)

    Before discussing the properties of incorporated nouns and what these properties reveal about the structure of the complement of V, I begin by arguing that incorporated nouns are the complements of V. As noted by Baker (1996), themes are the only arguments of (di)transitives able to incorporate.

(18) a. ✓*Theme incorporation*
          Onén:ia'   wa'tkatsiserà:rihte'.
          o-neni-a'   wa'-t-ka-**tsiser**-a-hri-ht-e'
          NP-stone-NSF FACT-DUP-NA-pane-JR-shatter-CAUS-PUNC
          'The stone broke the windowpane.'   (Baker, 1996:292, K.)

    b. ✗*Agent incorporation*
          *Io'arèn:ton   on'ennarátsion.
          io-a'ar-enht-on   wa'-w-**a'enn**-a-ratsion-'
          NP-net-hang-STAT FACT-NA-arrow-JR-tear-PUNC
          Intended: 'The arrow tore the curtains.'   (Baker, 1996:292, K.)

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[7]Despite this, there is a small class of verbs that may not incorporate their apparent themes, as in (i). I tentatively suggest this may have to do with their being psych-verbs and thus having different argument structural properties (Belletti and Rizzi, 1988), but I leave these for further work.

(i) a. *Kehià:ra's   ne owén:na'.*
         k-ehiahr-a-'s   ne o-wenn-a'
         1SGA-remember-JR-HAB NE NP-word-NSF
         'I remember a word.'

    b. **Kewennahià:ra's.*
         ke-wenn-a-ehiahr-a-'s
         1SGA-word-JR-remember-JR-HAB
         Intended: 'I remember a word.'   (DeCaire et al. 2017:3, dialect unknown)

[8]Most examples of incorporation are semantically compositional, meaning the incorporated root and the verb clearly compose to make a verb where the incorporated noun is understood as an argument of the verb root (e.g., fish-buying). However, there is another type of incorporation, termed "idiomatic" incorporation, in which the verb and the incorporated root do not clearly compose and instead an idiomatic reading is obtained. Renard (2023) argues that in compositional incorporation the incorporated root is a nP, while in idiomatic incorporation it is a $\sqrt{}$ that directly combines with the verbal root. Presumably my account is also able to extend to idiomatic incorporation, since I suggest incorporated nouns originate in the domain of special meaning (Arad, 2003; Harley, 2014; Marantz, 1997, 2008). However, I do not further explore idiomatic incorporation in this work.

    c. ✗*Applied argument incorporation*
      *Áhsire'   enkewirónnien'.
      ahsir-e'   en-ke-**wir**-onni-en-'
      blanket-NSF FUT-1SGA-baby-make-BEN-PUNC
      Intended: 'I will make a blanket for the baby.'   (Baker, 1996:293, K.)

Note that incorporation is not restricted to direct objects; as in (19), the subjects of unaccusatives are able to incorporate just like the themes in (di)transitives (Baker, 1996).

(19)   *Ó:nen wa'o'serehtakè:tohte'.*
       onen   wa'-io-**'sere**-ht-a-ke'toht-e'
       now   FACT-NP-car-NMLZ-JR-appear-PUNC
       'The car stuck out (e.g., of the garage).'   (Baker, 1996:293, K.)

Nevertheless, unergative subjects may not incorporate. (See Baker, 1996 for independent diagnostics of the unergative-unaccusative distinction in Kanien'kéha.)

(20)   **Wa'tkawirahséntho'.*
       wa'-t-ka-**wir**-ahsentho-'
       FACT-DUP-NA-baby-cry-PUNC
       Intended: 'The baby cried.'   (Baker, 1996:294, K.)

This pattern is clearly explainable through the lens of syntactic structure. The commonality between themes of (di)transitives and unaccusative subjects is their base generated position as complements of the verbal root. I therefore assume that incorporated nouns are generated as the complements of V, following previous work on incorporation (Baker, 1988; Barrie and Mathieu, 2016; Bittner, 1994; Chung and Ladusaw, 2004).[9] In addition to capturing the distinction between arguments that may and may not incorporate, positing that the incorporated noun is the complement of V also accounts for the fact that incorporated nominals may saturate an argument of the verb on their own. With this assumption in place, I now argue that incorporated material must be nP.

3.2 Morphological evidence of incorporated nP

In the verbal stem, the incorporated noun appears just before the verb. Three examples of this are shown below. In (21), the root *nenhst* 'corn' is incorporated, appearing immediately before the verb root *aweron* 'pour out, spill'. Similarly, the root *konhs* 'face' is incorporated twice in (22), both times appearing directly before the verb (*nenhskw* 'steal' and *enhaw* 'carry', respectively). The *a* intervening between *konhs* 'face' and *nenhskw* 'steal' is often called the "joiner" or "linker" vowel in Iroquoian literature (see Michelson, 1988:157); I will further discuss the importance of the joiner in §4.

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[9]This is by and large true for compositional incorporation. Renard (2023:26) notes that in that idiomatic incorporation, the incorporated noun may be a theme, goal, source, or location; however, as he notes, it is not always clear in these idioms as to what the theta-role of the incorporee is. I remain agnostic as to if his idiomatic examples of incorporated nouns truly represent non-theme theta-roles, as they seem potentially compatible with theme readings.

(21) *Ieniakwanenhstáweron*   *sók...*
      i-en-iakwa-**nenhst**-aweron   sok
      TRANS-FUT-1EXCL.PLA-corn-pour[PUNC] and.then
      'We would pour the corn into it, then...'   (Horne, 1976a, K.)

(22) *Context: There is a powerful sorcerer who can steal your face if you look him in the face.*
      Tá: tentshiatkà:neren   *rakonhsanénhskwas*
      toka t-en-tshi-at-kahner-en   ra-**konhs**-a-nenhskw-as
      if   DUP-FUT-2SG>MSG-SRFL-look.at-STAT MSGA-face-JR-steal-HAB
      ienhiakonhsénhawe'.
      i-en-hia-**konhs**-enhaw-e'
      TRANS-FUT-MSG>2SG-face-carry-PUNC
      'If you look at the face-stealer, he will steal your face.'   (McDonald, 2023)

Note that the incorporated "nouns" in (21–22) consist of only nominal roots. Compare their unincorporated nominal counterparts in (23–24).

(23) *ó:nenhste'*
      o-nenhst-e'
      NP-corn-NSF
      'corn'   (McDonald, 2019)

(24) *okónhsa'*
      o-konhs-a'
      NP-face-NSF
      'face'   (McDonald, 2017)

As (23) and (24) show, Kanien'kéha freestanding nominals are morphologically complex, consisting of an intransitive pronominal prefix, the root, and a nominal suffix.[10] In both (23) and (24), the agreement prefix is the neuter patient *o-*, and the nominal suffixes are *-e'* and *-a'*, respectively. However, as (21) and (22) attest, incorporated nouns lack both an agreement prefix and a nominal suffix. Indeed, while the root *itsi* 'fish' alone may be incorporated (25a), incorporation may not occur with any combination of the neuter agent *ken-* and the noun suffix *-on* (25b), although these appear when *itsi* 'fish' occurs unincorporated (26).

(25) a. *Tsitsiahserón:nis*   *ken?*
          ts-itsi-a-hseronni-s   ken
          2SGA-fish-JR-arrange-HAB Q
          'Are you preparing fish?'

---

[10]The set (i.e., agent or patient) of the intransitive prefix has been said to be lexically specified (Bonvillain, 1973), though it may index a sort of noun class marking; roots taking agent prefixes tend to be man-made, while those taking patient prefixes are naturally occurring (McDonald, p.c., Barrie and Jung, 2020). There are three noun suffixes, *-(e)'*, *-a'*, and *-on*. These are lexically conditioned by the nominal root (Bonvillain, 1973). See §5.1.1 for more details on freestanding nominals.

b. *{ *Sekentsionhserón:nis* /   *Tsitsionhserón:nis* /
     se-**ken**-itsi-**on**-hseronni-s   ts-itsi-**on**-hseronni-s
     2SGA-NA-fish-NSF-arrange-HAB 2SGA-fish-NSF-arrange-HAB

     Sekentsiahserón:nis }   *ken?*
     se-**ken**-itsi-a-hseronni-s   ken
     2SGA-NA-fish-JR-arrange-HAB Q
     Intended: 'Are you preparing fish?'   (McDonald, 2023)

(26) *kéntsion*
       ken-itsi-on
       NA-fish-NSF
       'fish'   (McDonald, 2017)

In addition to the root case, some nominals and all verbal roots require an overt nominalizer in order to incorporate. The nominalizer has many forms, the most common of which are *-htsher* and *-'tsher*.[11] Crucially, the nominalizer comes between the incorporated root and the verbal root.

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[11]Verbal roots require a nominalizer both for incorporation and for forming freestanding nouns. For example, the root *hiaton* 'write' uses the nominalizer *-hser* both to incorporate (ia) and to appear as a freestanding nominal (ib).

(i) a. *Tó: khiatonhseraié:na.*
         to: k-hiaton-**hser**-a-iena
         let.me 1SGA-write-NMLZ-JR-hold
         'Let me hold this book!'   (McDonald, 2023)
     b. *kahiatónhsera*
         ka-hiaton-**hser**-a
         NA-write-NMLZ-NSF
         'paper, book'   (McDonald, 2017)

Conversely, nominal roots requiring an overt nominalizer for incorporation only require it when incorporated. When appearing as freestanding nouns, these roots appear without any overt nominalizer. An example is the root *ahthenno* 'ball', which only appears with the nominalizer *-'tsher* when incorporated in (iib).

(ii) a. *ahthén:no*
          ahthenno
          ball
          'ball'   (McDonald, 2019)
      b. *Ne enhóntste'*   *ne enhonhthenno'tsherónnia'te'.*
          ne en-hon-atst-e'   ne en-hon-ahthenno-**'tsher**-onni-a-'t-e'
          NE FUT-MPLA-use-PUNC NE FUT-MPLA-ball-NMLZ-make-JR-CAUS-PUNC
          'They would use this to make their ball out of.'   (Lazore, 1976b, K.)

See Barrie and Jung, 2020 for further discussion of Northern Iroquoian roots and the alternation between forms with nominalizers and without.

(27)   a.   *Nominal with nominalizer*
           Tánon' ó:nen ó:ni' iahothón:te'ne'
           tanon'   onen   oni'   i-a'-ho-athonte-'n-e'
           and   now   also   TRANS-FACT-MsGP-hear-INCH-PUNC
           "tsik a tsik, tsik a tsik, tsik a tsik," taiohstien'takaré:re', ...
           tsik a tsik   t-a'-io-hstien-**'t**-a-karere-'
           ONOM   CIS-FACT-NP-bone-NMLZ-JR-noise.travel-PROSP
           'And just then he heard the sound of bones coming, "chick a chick, chick a chick, chick
           a chick."'   (Jacobs, 1976a, K.)

       b.   *Verb with nominalizer*
           Wahatkahrhi'tahtsheratkwé:ni.
           wa'-h-atkahrhi't-a-**htsher**-atkweni
           FACT-MsGA-manipulate-JR-NMLZ-win[PUNC]
           'He won a (finger) toy (i.e., a toy involving fine motor skills).'   (McDonald, 2023)

Due to its transparent nominalizing function, I assume that the nominalizer is an exponent of n.
I additionally assume that roots such as those in (21) and (22) additionally combine with a null n.
This assumption is supported in that the conditioning of an overt nominalizer is dependent on the
incorporated root, not the verb (Barrie and Mathieu, 2016). More concretely, if a root appears with
the overt nominalizer *-'tsher*, it will appear with *-'tsher* with all verbs that it incorporates into. On
the other hand, the same verb can incorporate roots appearing with *-'tsher* and those appearing with
-'t, as well as those occurring without an overt nominalizer. The verb simply incorporates some-
thing with a nominal category, whether this occurs with an overt nominalizer or not. Additionally,
incorporated nominals show the same syntactic distribution and semantic properties regardless of
the occurrence of an overt nominalizer. The above examples then lend support to the analysis that
incorporated arguments are nPs, thus that internal argument-selecting V may merge with nPs.

(28)   = *(27a) hstien'takarere*
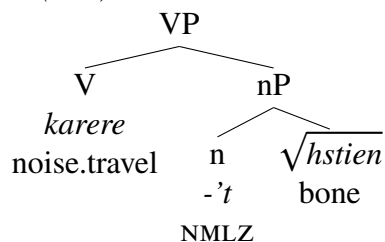
This suggests that verbs should be able to incorporate material that is larger than a root, so long
as it has been nominalized and thus is a nP. This is borne out in (29). The incorporated *atokwa*
'spoon', bracketed, is morphologically complex, containing derivational morphology and voice
morphology. However, it may be incorporated as long as it has been nominalized; in other words,
a morphological complex may merge with V as long as it is inside a nP.

(29)   *Eniontokwa'tsherótsenhte'*   *iehsnonhsà:ke...*
       en-ion-[at-o-kwa]-**'tsher**-oht-hsi-a-ht-e'   ie-hsnonhs-a-'ke
       FUT-FIA-[SRFL-in.water-REV]-NMLZ-stand-REV-JR-CAUS-PUNC FIA-finger-JR-LOC
       'She would spoon some out into her fingers...'   (Horne, 1976a, K.)

Given the presence of voice morphology in the incorporated material in (29), I suggest that the incorporated *atokwa* represents a VoiceP. Throughout my fieldwork, it appears that roots (both verbal and nominal) and VoicePs are the two types of material that may appear incorporated. This follows a crosslinguistic pattern of what may be nominalized (Grimshaw, 1990; Kratzer, 1996; Šereikaitė, 2022), additionally suggesting that the nP analysis of incorporated roots is on the right track.[12]

While the data so far have shown incorporated material may be nPs, there is morphological evidence that the complement of V can have *no further structure* than nP. Presumably the addition of morphology, such as the agreement prefix and nominal suffix of unincorporated nouns, requires the addition of structure above nP (at least within the Distributed Morphology style framework in which I am working; Halle and Marantz, 1993). The forms in (25b) then suggest that additional structure is disallowed with incorporated nouns, as expected if V may only merge with nPs.

Other nominal morphology is disallowed in incorporated roots as well. Nouns may appear with a small group of lexical suffixes, such as *-'onwe*, *-honwe* 'genuine, real'.

(30) *ahtahkwa'ón:we*
      ahta-hkw-a-**'onwe**
      shoe-NMLZ-JR-real
      'moccasins'   (Martin, 2023:12)

Importantly, lexical suffixes like *-'onwe* are presumably introduced by higher projections than n since they attach outside of overt nominalizers like *-hkw*, as in shown in (30). Then if incorporated material must be a nP, incorporated nouns should not be able to appear with these suffixes, and indeed, they may not. In (31a), the root *na'tar* 'bread' may appear with the lexical suffix *-honwe* 'real' when occurring as an unincorporated nominal.[13] However, if the both the root *na'tar* 'bread' and the lexical suffix *-honwe* are incorporated, as in (31b), ungrammaticality results. Note that *na'tar* is easily incorporable; it is incorporated just fine in (31a), suggesting that incorporation of te lexical suffix is the cause of the ungrammaticality.

(31) a. *Ake'nisténha'*   *wa'onkerihónnien'*
          ake-'nistenha'   wa'-ionke-rihw-onni-en-'
          FZSG>1SG-mother   FACT-FI>1SG-matter-make-BEN-PUNC

          akena'tarón:ni   *ne kana'taronkhón:we.*
          a-ke-na'tar-onni   ne ka-na'taronk-**honwe**
          OPT-1SGA-bread-make[PUNC] NE NA-bread-real
          'My mother taught me to make cornbread.'

---

[12]Barrie and Mathieu (2016) note that since the incorporated material includes the semi-reflexive prefix *at-*, incorporation cannot be formed by head movement, since head movement should result in suffixation, as it does elsewhere in the verbal stem. I will propose in §4 that heads within the VoiceP form a morphological word together. Under my account, this behavior is expected; first, the heads of the nominalized VoiceP form a morphological word together and linearize as such. Following that, the heads and the nominalized VoiceP within the verbal VoiceP form a morphological word. This ordering ensures that the morphemes in the nominalized VoiceP appear in the same ordering as they would in appearing as a verbal VoiceP, without breaking any of the machinery I propose in §4.

[13]The root *na'tar* 'bread' gains the additional material *-onk* when suffixed with *-honwe*. According to speakers, the root for 'bread' used to be *na'taronk* everywhere by their (grand)parents but in present speech the *-onk* has disappeared outside of this form.

b. *Ake'nisténha'   wa'onkerihónnien'
    ake-'nistenha'   wa'-ionke-rihw-onni-en-'
    FZSG>1SG-mother FACT-FI>1SG-matter-make-BEN-PUNC
    akena'taronkhonión:ni.
    a-ke-na'taronk-**honw**-onni
    OPT-1SGA-bread-real-make[PUNC]
    Intended: 'My mother taught me to make cornbread.'

The ban on morphology occurring in nominal projections higher than nP in incorporated nouns thus provides another argument that incorporated elements are nPs. Note that under my proposal it might be expected that *na'taronkhonwe* 'cornbread' would be to able to incorporate if it combined with an overt nominalizer, making it of category n. The sentence does in fact improve when *na'taronkhonwe* combines with the overt nominalizer *-'tsher*.

(32) ?*Ake'nisténha'   wa'onkerihónnien'*
      ake-'nistenha'   wa'-ionke-rihw-onni-en-'
      FZSG>1SG-mother FACT-FI>1SG-matter-make-BEN-PUNC
      akena'taronkhonwe'tsherón:ni.
      a-ke-na'taronk-honwe-'tsher-onni
      OPT-1SGA-bread-real-NMLZ-make[PUNC]
      Intended: 'My mother taught me to make cornbread.'
      Speaker comment: Stretching incorporation a bit, but not terrible.   (McDonald, 2023)

I attribute the degraded nature of (32) to the redundancy of nominalizing an already categorized root. Presumably, a null n has already merged with the root *na'tar* 'bread' before suffixing *-honwe*, meaning the overt nominalizer is nominalizing a noun. I assume this is what results in the "stretched" reading the consultant notes.

3.3   Semantic evidence of incorporated nP

Having shown that incorporated elements maximally consist of an incorporated item (root or more complex material) and a nominalizer, I have argued that incorporated nouns may only be nPs. Taking incorporated nouns to be the complements of V due to their argument-like properties, I have therefore suggested that Kanien'kéha internal argument-selecting V may merge with nP. I now propose semantic evidence that leads to the same conclusion.

3.3.1   Animacy restrictions

While incorporation is highly productive in Kanien'kéha, there are certain nouns that are unable to incorporate. A large portion of these unincorporable nouns are roots denoting animate entities. For example, the root *ahkwari* 'bear' is unable to incorporate (33a) and instead must appear as a unincorporated noun. In (33b), it doubles the incorporated root *nahskw* '(domesticated) animal'.

(33) a. *Sahkwari'tanorónhkwa   ken?
          s-ahkwari-'t-a-noronhkw-ha   ken
          2sgA-bear-NMLZ-JR-love-HAB Q
          Intended: 'Do you love bears?'
          Speaker comment: "You can't incorporate that..."

      b. *Senahskwanòn:we's*   *ken ne ohkwá:ri?*
          se-nahskw-a-nonhwe'-s   ken ne o-ahkwari
          2sgA-domesticated.animal-JR-like-HAB Q   NE NP-bear
          'Do you like bears?'   (McDonald, 2023)

The animacy restriction on incorporation is not a hard-and-fast rule, however. Speakers directly commented that the root *ahkwari* 'bear' cannot be incorporated on a few occasions, although there is at least one example of natural speech in which *ahkwari* has been incorporated (34) and the speaker I worked with even volunteered a form with an incorporated animal nominal *tsinowen* 'mouse' (35).

(34) *Ohontsià:ke*   *ionsonhkwari'takwénhtara'ne'.*
      o-hontsi-a-'ke   i-ons-a'-w-**ahkwari**-'t-akwenhtar-a-'n-e'
      NP-earth-JR-LOC TRANS-REP-FACT-NA-bear-NMLZ-lie.flat-JR-INCH-PUNC
      'The bear fell back down to the earth, splayed out.'   (Bonvillain and Francis, 1980:85)

(35) *Kattsinowen'tsherató:rats.*
      k-at-**tsinowen**-'tsher-atorat-s
      1sgA-SRFL-mouse-NMLZ-hunt-HAB
      'I'm hunting mice.'
      Speaker comment: "My uncle used to say this."   (McDonald, 2023)

Additionally, while animates are generally banned from incorporation, certain animates that are deemed as "low animacy" such as *wir* 'baby' and *nahskw* 'domesticated animal, slave' may incorporate (Baker, 1996; Koenig and Michelson, 2015; Woodbury, 1975). Still, speakers I worked with only begrudgingly accepted examples incorporating *wir* and only once created them spontaneously, even though she had no problem incorporating *nahskw*.[14] Baker (1996) notes that a large portion of examples in which animate roots are incorporated are "judged to be well formed, but involve treating the [animate] as a thing, without desires or self-control" (316). This intuition is the port of entry into another argument that V must merge with nP.

Unlike highly animate roots, inanimates (i.e., neuter nominals) are always able to incorporate. Adopting feature geometry approach *à la* Harley and Ritter (2002), Coon (2023) proposes that the difference between neuter nominals and other third person "genders" in Kanien'kéha is an [ANIM] animacy feature. Importantly, this [ANIM] feature is part of a *person* geometry, as has been suggested of animacy features elsewhere (see Oxford, 2019; Toosarvandani, 2023), rather than a gender geometry. Whereas masculine, feminine-indefinite, and feminine-zoic nominals have [ANIM] in their φ-feature geometries, neuters have no φ-features at all; crucially, this means neuters have no person features. Viewed from this angle, nouns without any person features are always able to incorporate.

---

[14]Note that the spontaneous example involved incorporation of *wir* into the possession verb *ien* 'to lay, to have', which is part of the class of verbs that Baker (1996) claims is invariably able to incorporate animates.

This is entirely unsurprising under the nP analysis. nPs lack further functional structure in the nominal domain, and as such, any person features, which I assume would appear in a Pers projection (or φP; Danon, 2006, 2011; Forbes, 2019; Kalin, 2018; Lidz, 2006; Piggott, 1989; Richards, 2015, among others) above n, would not be introduced for the nominal. It is then to be expected that incorporated nouns, which are nP complements of V, would lack person features. Since φ-features are always absent on neuter nominals following Coon (2023), I assume they do not project Pers, and therefore are functionally complete as nPs. In this form, they are able to merge with V and satisfy the requirement that V must merge with nPs. This predicts the high productivity of incorporation for inanimates.

Since animates are always non-neuter, they always have the person feature [ANIM]. Animates then require a Pers projection in which to introduce their animacy feature. However, this creates tension for incorporation. PersP is not a nP and therefore is not of the right category to incorporate. This predicts that animates are largely unavailable for incorporation. Nevertheless, certain animates are incorporable. However, recall that these are seen as . As Coon (2023) suggests, an interpretation of an animate as an object without any free will is tantamount to these animates having no [ANIM] feature. In this case, I suggest certain animate roots do not project a PersP and therefore have no [ANIM] feature. This allows them to project as nPs and therefore merge with V and incorporate. The choice is then up to the speaker as to whether certain roots are "animate enough" to project animacy features. The requirement on the category of the complement of V therefore correctly predicts both the productivity of incorporation for inanimates and the interspeaker variation on which animates may incorporate.

Note that this is a major strength of the generative approach I propose. A lexical approach in which incorporated nouns form compounds with verbs in the lexicon, with these compounds representing "institutionalized activities" (e.g., Mithun, 1984), cannot account for the fact that only inanimates can be the themes of "institutionalized activities", even though events like deer-hunting were presumably institutionalized to Iroquoian peoples, nor can it account for the fact that these compounds actually do allow animate themes, just with the caveat that these animates are interpreted as inanimates.

The fact that incorporated nouns must be nPs and therefore may not come with φ-features correctly predicts the agreement facts as well. Another crosslinguistic property of noun incorporation displayed by Kanien'kéha incorporation is that verbs with incorporated nouns do not agree with the incorporated argument (Baker, 1996; Chung and Ladusaw, 2004; Van Geenhoven, 1998).[15] The agent set of intransitive agreement is used by agent-theme transitives with incorporated objects, shown by the masculine singular agent prefix *ra-* which indexes only the external argument of baby-liking. On the other hand, transitive agreement with both the external argument and the incorporated *wir* 'baby' is degraded.

(36)   a. *Rawiranòn:we's.*
            ra-wir-a-nonhwe'-s
            MSGA-baby-JR-like-HAB
            'He likes babies.'

---

[15] As Baker (1996) notes, this is not always true, and some incorporated animates display variation between intransitive and transitive agreement. Due to reasons of space, I do not attempt an account of these cases, though an analysis in which Kanien'kéha roots refer to kinds may extend my proposal to these cases.

b. *?*Shakowiranòn:we's.*
   shako-wir-a-nonhwe'-s
   MSG>3PL-baby-JR-like-HAB
   Intended: 'He likes babies.'   (Baker, 1996:21, K.)

For unaccusatives with an applied object, the patient set of intransitive agreement is used to index the unincorporated argument. In (37), the applied argument *Sá:k* is marked on the verb with the masculine singular patient prefix *ho-*, while the incorporated root *wis* 'glass' receives no marking at all.

(37) *Sá:k wahowí:sen'se'.*
      Sak   wa'-ho-wis-en-'s-e'
      Sak   FACT-MSGP-glass-fall-BEN-PUNC
   'Sá:k dropped the glass.'   (Coon, 2023:29, K.)

I argue that, under the approach for Northern Iroquoian agreement outlined in Coon (2023), these facts are predicted by an analysis of incorporated objects as nPs. She proposes that pronominal prefixes are pronominal clitics generated via an Agree relation between a φ-probe [uφ] with unvalued features and a nominal argument (Anagnostopoulou, 2003; Béjar, 2003; Preminger, 2014, 2019). She suggests the three sets of agreement involve [uφ] probes on different heads: a [uφ]$_A$ probe on Infl generating agent prefixes, a [uφ]$_P$ on v generating patient prefixes, and a [uφ]$_{EA}$ on Voice. These are schematized in the table below.

	agreement set	functional head(s)	probe
(38)	agent (A)	Infl	[uφ]$_A$
	patient (P)	v	[uφ]$_P$
	transitive	Voice+v	[uφ]$_{EA}$+[uφ]$_P$

She assumes that in transitives, a bundled Voice+v (see Harley, 2017; Pylkkänen, 2008) hosting both the [uφ]$_P$ and the [uφ]$_{EA}$. Both [uφ]$_A$ and [uφ]$_P$ participate in standard Downward Agree, while [uφ]$_{EA}$ has its features valued by the argument in Spec,VoiceP as a by-product of the Merge operation (as is proposed for ergative agreement elsewhere; Coon, 2017; Wiltschko, 2006). The Agree relations formed by the [uφ]$_A$ and [uφ]$_P$ probes generate agent and patient clitics, respectively. Transitive agreement instead arises from the copying back of features by [uφ]$_P$ and [uφ]$_{EA}$ onto the same head, which are then local enough to create the portmanteaux prefixes via some morphological mechanism. For discussion of fine-grained details the reader is directed to her manuscript. Important here is that [uφ]$_{EA}$ does not probe when [uφ]$_P$ fails to find a goal and that [uφ]$_A$ always appears on Infl. The last crucial ingredient is that, while probes must commence search operations, they may fail to find a goal to Agree with and this does not crash the derivation (Preminger, 2014).

Under this system of agreement, it is clear how intransitive agreement arises in transitives even with incorporated animates like *wir* 'baby'. The derivation for (36a) is in (39).

(39)   = *(36a)*
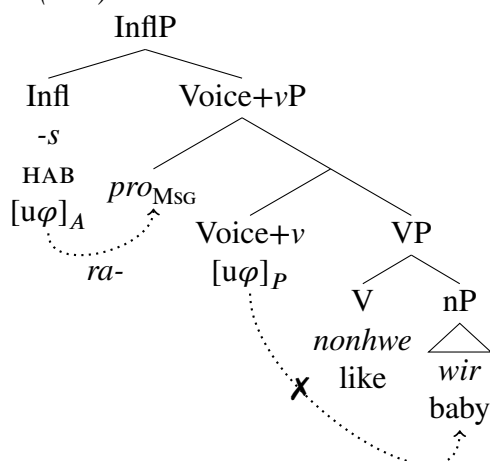
In the case of (36a), the $[u\varphi]_P$ probe on v probes down into its c-command domain in search of φ-features. Since all complements of V are nPs, including animate incorporees as discussed above, they have no φ-features. This follows from their lacking a Pers head. This means $[u\varphi]_P$ finds no features and fails to form an Agree relation. This is not fatal but does cause the $[u\varphi]_{EA}$ to fail to probe. The $[u\varphi]_A$ then searches its c-command domain and finds the features of the *pro* in Spec,Voice+vP. This results in the generation of a pronominal prefix of the agent set based only on the features of the subject in Spec,Voice+vP.

A similar story applies to the patient set agreement with applied unaccusatives as in (37). The only important difference is that the applied argument is introduced by a functional head Appl, and thus appears below a v projection, placing the applied argument in the purview of the $[u\varphi]_P$ probe, which generates intransitive patient set agreement for the applied argument. In this way, Coon's (2023) proposal of agreement captures the intransitive agreement of verbs with incorporated objects, even in cases where the incorporatee is animate. Crucially, the correct facts are only generated if the incorporated complement of V has no φ-features, and thus nPs fit the bill.

3.3.2   Number neutrality

As is common crosslinguistically (see, e.g., Van Geenhoven, 1998 on Kalaallisut and Baker, 2009 on Mapudungun, as well as Baker, 1996 on Kanien'kéha itself), incorporated nouns in Kanien'kéha are number neutral. The bare incorporated root *ront* 'tree' in (40) is compatible with both a context in which one seed was planted and a context where multiple seeds were planted.

(40)   *Sosén: wa'enenhaiéntho'.*
       Sosen   wa'-ie-nenh-a-ientho-'
       Sosen   FACT-FIA-seed-JR-plant-PUNC
       'Sosén: planted seed(s).'
       ✓ *Context 1: Sosén: got one seed from Johnny Appleseed. She went home and planted that seed.*
       ✓ *Context 2: Sosén: is starting a garden, so she went to the store and bought bags of seeds. She then planted them.*   (McDonald, 2023)

This number neutrality is confirmed in (41). Here, both the external modifiers *énhska* 'one' and *sha'té:kon* 'eight' may felicitously modify the incorporated root *ront* 'tree'.

(41) *Sosén: { énhska / sha'té:kon } wa'erontaiéntho'.*
      Sosen   enhska   sha'tekon   wa'-ie-ront-a-ientho-'
      Sosen   one   eight   FACT-FIA-tree-JR-plant-PUNC
      'Sosén: planted { one tree / eight trees}.'   (McDonald, 2023)

Number neutrality immediately follows if incorporated nominals are nPs. Since nPs lack any larger functional projections in which to introduce number features (such as a NumP; Ritter, 1991), they are unspecified for number; this allows nPs to refer both to a single individual as well as a plurality or kind. This neutrality is exactly what is found in incorporated nouns.

The picture is complicated slightly by freestanding nouns. Number in unincorporated nouns may additionally be unmarked (Mithun, 2001). Both (42a) and (42b) contain the root *itshena* 'domesticated animal', marked with prefixes indexing the features of their possessor(s).[16] However, neither instance of *itshena* is overtly marked with number morphology; only agreement on the verb distinguishes the number of dogs. In other words, the noun root *itshena* is compatible with both singular or plural agreement morphology even though it appears without overt number morphology.

(42) a. *Singular reading*
          Terrance roia'tí:saks   (*ne*) *akitshé:na*   *è:rhar.*
          Terrance **ro**-ia't-isak-s   ne ak-**itshena**   ehrhar
          Terrance MSG>MSG-body-look.for-HAB NE 1SGP-domesticated.animal dog
          'Terrance is looking for my dog.'   (McDonald, 2023)

      b. *Plural reading*
          Ne raotitshé:nen   *è:rhar wa'kontiia'táhton.*
          ne raoti-**itshenen**   ehrhar wa'-**konti**-ia't-ahton
          NE MPLP-domesticated.animal dog   FACT-FZPLA-body-get.lost[PUNC]
          'Their dogs got lost.'   (Mithun, 2001:41, K.)

Although freestanding nominals are also able to remain unmarked for number, the number neutrality for incorporated nominals is still compatible with the analysis that incorporated nominals are nPs and may be adequately captured by such an analysis.

3.3.3 Discourse referentiality and specificity

As has been noted in the incorporation literature (e.g., Baker, 1996, Barrie and Mathieu, 2016 for Iroquoian, Bittner, 1994, Van Geenhoven, 1998 for Inuit), incorporated nouns vary x-linguistically as to whether they may introduce discourse referents. In Kanien'kéha, incorporated nouns may serve as the antecedents for later pronouns. The root *ient* 'wood' is incorporated into the verb *kw* 'pick, harvest' in (43), and in the later part of the sentence, it serves as the understood neuter theme argument of *ta'* 'put into'.

---

[16]The final vowel in the root for 'domesticated animal' is subject to interspeaker variation.

(43) *Iaháhsa'*   *ki*   *tsi raientákwas*   *tánon' akwé:kon*
      i-a'-ha-hsa'   ki   tsi ra-**ient**-a-kw-as   tanon' akwekon
      TRANS-FACT-MsGA-finish[PUNC] EMPH? C MsGA-wood-JR-pick-HAB and   all
      ka'seréhtakon   *waháta'*   *sok tontahahtén:ti'.*
      ka-'sere-ht-a-kon   wa'-**ha**-ta'   sok t-ont-a'-h-ahtenti-'
      NA-car-NMLZ-JR-LOC FACT-MsGA-put.into[PUNC] then DUP-CIS-FACT-MsGA-leave-PUNC
      'He finished chopping wood and put it into the wagon, then he left for home.' (Jacobs Jr.,
      1976, K.)

Recall that neuter arguments do not trigger agreement, thus the intransitive third person masculine singular agent prefix *ha-* appears on the root *ta'* 'put into' in (43). We see in (44) that *ta'* may incorporate a theme *'nerohkw* 'box', which is consistent with an analysis where *ta'* 'put into' in (43) occurs with a null object *pro*. This suggests that the incorporated *ient* 'wood' in the verb *kw* 'pick, harvest' is the antecedent of a later pronoun.

(44) *Context: I'm moving out to college, and my parents are helping me pack and leave.*
      Ka'seréhtakon   *waha'nerohkwáta'*   *ne rake'níha.*
      ka-'sere-ht-akon   wa'-ha-**'nerohkw**-a-ta'   ne rake-'niha
      NA-car-NMLZ-LOC FACT-MsGA-box-JR-put.into[PUNC] NE MsG>1SG-father
      'My father put a box/boxes in the car.'   (McDonald, 2023)

Not all Iroquoianist literature agrees that incorporated nouns introduce referents, though. Mithun (1984:871) claims that incorporated nouns do not introduce any discourse referents since reference back to the incorporated noun in spontaneous speech often includes restatement of the root, as in (45), where the harnesses introduced by the incorporated *ahkwenni* 'harness' are referred back to by the unincorporated nominal *aonahkwennia* 'their harnesses'.

(45) *Wahshakohkwenniahrá:ko'*   *ne akohsá:tens tánon' aten'enhrà:ke*
      wa'-hshako-**ahkwenni**-a-hr-a-ko-'   ne akohsatens tanon' aten'enhr-a-'ke
      FACT-MsG>3PL-harness-JR-set.on-JR-REV-PUNC NE horse   and   fence-JR-LOC
      wahrotárhoke   *ne aonahkwénnia'.*
      wa'-hr-otarhok-e   ne aon-**ahkwenni**-a'
      FACT-MsGA-hook-PUNC NE FZPLP-harness-NSF
      'He took the harnesses off the horses and hung the harnesses on the fence.'   (Mithun,
      1984:871, K.)

Furthermore, she argues, agreement can have antecedents that are never overtly introduced in the syntax. In (46), the verb *atenonhn* 'watch, babysit' does not introduce any syntactic object. However, agreement in the next verb may refer back to an implicit argument of *atenonn*.

(46) *Katenónhnhahkwe.*   *Áh tsi iehétken.*
      k-ate-nonhnha-hkwe   ah tsi ie-hetken
      1SGA-SRFL-guard-FOR.PST ah C FIA-ugly[STAT]
      'I was babysitting. Boy, is she ugly!'   (Mithun, 1984:871, K.)

The crux of this disagreement is whether or not incorporated nouns form complex verbs in the lexicon that then implicate arguments (e.g., if you fish-buy, a fish is implied in the action), or whether

incorporated nouns are truly referential in and of themselves. A generative syntactic account can handle both the redundancy observed in (45) and the covert antecedent in (46) and fares better with respect to other patterns analyzed in this work. I therefore assume (as do Baker, 1996; Barrie and Mathieu, 2016; Chung and Ladusaw, 2004 and Van Geenhoven, 1998) that incorporated nouns introduce discourse referents.

In addition to their referential status, incorporated nouns may also be specific. In other words, incorporated nouns can refer back to previously introduced referents. This is unlike Inuit, for example, in which incorporated nouns must always introduce new referents into the discourse (Van Geenhoven, 1998). In the following pair of sentences, a shirt made by Tié:r is introduced by the incorporated root *akia'tawi* 'shirt'. Then in the second sentence, the incorporated *akia'tawi* felicitously refers to the same shirt introduced just introduced in (47a), namely the one that Tié:r made.

(47) a. *Tié:r wahakwakia'tawi'tsherónnien'.*
          Tier   wa'-hakw-akia'tawi-'tsher-onni-en-'
          Tier   FACT-MSG>1SG-shirt-NMLZ-make-BEN-PUNC
          'Tié:r made me a shirt$_i$.'

      b. *...Enióhren'ne'*   *ienkakia'tawi'tsherá:ko'.*
          en-io-hren-'n-e'   i-en-k-akia'tawi-'tsher-a-kw-'
          FUT-NP-become.day-INCH-PUNC TRANS-FUT-1SGA-shirt-NMLZ-JR-pick.up-PUNC
          '... Tomorrow I will pick up the shirt$_i$.'   (McDonald, 2023)

Both the discourse referentiality and specific readings of incorporated nouns, properties typically associated with D, may be used to argue against an analysis of incorporated nouns as nPs. Nevertheless, I suggest that these properties may arise from nPs as is common in determiner-less languages. More concretely, I will propose that nPs can combine with verbs either through restricting *or* saturating the internal argument of the verb.

Previous semantic work has proposed that nPs, as bare nominals, are property-denoting expressions (e.g., Dayal, 2004), a commonality that has also been explored in the literature on incorporated nouns (Chung and Ladusaw, 2004; Van Geenhoven, 1998). This is equivalent to saying nPs are of type *<e,t>*. Then the common intuition that incorporated nouns modify their verbs can be formalized as an occurrence of Chung and Ladusaw's (2004) Restrict operation. The Restrict operation was motivated in part by incorporation, so its application here is a natural extension. It has also found use in Mayan (Coon, 2019; Little, 2020) outside of the Austronesian languages it was designed for. Restrict is a binary operation that takes as arguments a predicate and property and yields a predicate.

(48) *Restrict (Chung and Ladusaw, 2004:5)*
      Restrict(λyλx [feed'(y)(x)], dog') = λyλx [feed'(y)(x) $\wedge$ dog'(y)]

The Restrict operation then applies between the verb and an incorporated noun as below.

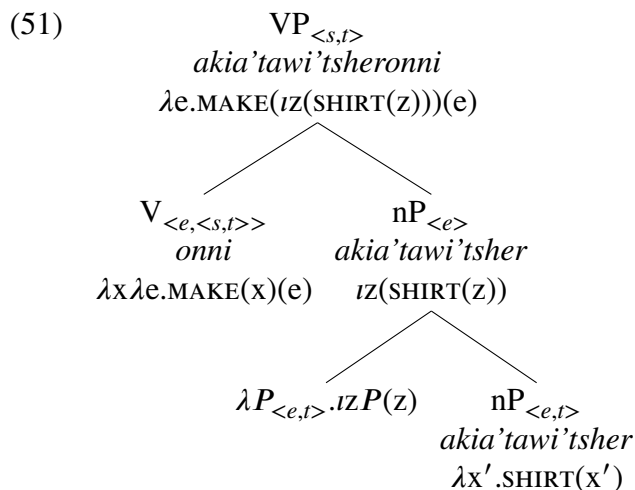(49)   VP$_{<e,<s,t>>}$
                     akia'tawi'tsheronni
              λxλe.MAKE(x)(e) $\wedge$ SHIRT(x)

           V$_{<e,<s,t>>}$ nP$_{<e,t>}$
             onni   *akia'tawi'tsher*
        λxλe.MAKE(x)(e) λx'.SHIRT(x')

I follow Chung and Ladusaw (2004), Diesing (1992), and Little (2020) in arguing that the VP is the domain of existential closure. While the derivation spelled out thus far is not identical in proposal to the semantic incorporation proposed by Van Geenhoven (1998), it has the equivalent effect of introducing into the LF a bound variable representing the incorporated nominal. The existential closure of the verbal argument results in a VP of type $<s,t>$. After existential closure, the event in (49) has the LF in (50).

(50) $\lambda e \exists x. \text{MAKE}(x)(e) \wedge \text{SHIRT}(x)$

Incorporation coupled with existential closure introduces a discourse referent that is the theme of the verbal predicate and has the properties of the incorporated noun. This machinery allows incorporated nouns to be used in new contexts, as in (47a), since they do not require a presupposition connected to a real-world object but instead presuppose the existence of an object(s) that fit the property of the incorporated noun. As Van Geenhoven (1998) proposes, this introduction of an existentially-bound variable makes this variable accessible for later reference by a pronoun. At no point in this semantic sketch does D-layer material need to be introduced in order to account for the incorporated noun's discourse referentiality.

The specificity of incorporated nouns requires a little more thought. I propose, as Little (2020) does for Ch'ol, that nPs can undergo type-shifting by a covert ι operator, taking the type $<e,t>$ property of the nP and shifting it to an individual of type $<e>$ such that the property is true of one entity. In this case, the nP of type $<e>$ standardly combines with the verbal predicate by Function Application, saturating the internal object. The specific reading of the incorporated noun in (47b) therefore arises as in (51).

(51)

$$\text{VP}_{<s,t>}$$
akia'tawi'tsheronni
$\lambda e. \text{MAKE}(\iota z(\text{SHIRT}(z)))(e)$

$\text{V}_{<e,<s,t>>}$ $\text{nP}_{<e>}$
onni   *akia'tawi'tsher*
$\lambda x \lambda e. \text{MAKE}(x)(e)$ $\iota z(\text{SHIRT}(z))$

$\lambda P_{<e,t>}.\iota z P(z)$ $\text{nP}_{<e,t>}$
akia'tawi'tsher
$\lambda x'. \text{SHIRT}(x')$

Note that both the existential closure of the argument in (49) as well as the type-shifting of the nP and subsequent Function Application of the internal argument in (51) both result in a VP of type $<s,t>$. Nevertheless, they result in different LFs of the incorporated nominal. In the former case, the internal argument is existentially closed and thus is the incorporated noun is interpreted as something with the property of being a shirt, while in the latter case, the internal argument is fully saturated by the incorporated nominal and thus the LF interprets it as a salient shirt. This difference directly leads to the ambiguity between incorporated nominals introducing discourse referents and those referring to specific entities.

An important piece of my proposal is that incorporated nouns do not undergo any movement into the verb complex nor do they form a compound with the verb in the lexicon. Here, incorporated nouns are simply internal arguments, the complements of V just as is commonly assumed in many languages, including English. The use of an *ι* operator for an internal argument of type <*e,t*> is a common assumption for arguments in languages without determiners, and so its use here is not surprising (see Bošković, 2008 for syntactic arguments that determinerless languages lack determiners, and see Chierchia, 1998; Dayal, 2004; Little, 2020; Partee, 1987 for semantic analyses using the *ι* operator). Again, through independently motivated machinery, the nP analysis of incorporated material can account for specific readings of incorporated nouns without appealing to higher structure.

3.4   Summary

I have proposed here that incorporated nouns are the complements of V and that they are nPs. I first argued this with morphological evidence alone, then I examined the semantics of the incorporated noun. On the morphological side, I showed that incorporated morphology is extremely bare involving maximally an incorporated item and a nominalizer, thus only spelling out instantiations of heads within nP. I then argued that animacy restrictions and number neutrality of incorporees also suggest an account in which incorporated nouns are nPs. I lastly discussed discourse-referentiality and specificity of incorporated nouns. I pointed out that these properties of incorporated nouns receive an analysis under my proposal with a few common semantic assumptions and do not require extra syntactic structure for incorporated nouns.

4   Incorporation and formation of the verbal word

Having motivated the fact that incorporated nouns are generated as nP complements of V, I now turn to the specific nature of incorporation, namely how it is that these nPs become incorporated. I begin by showing that the Kanien'kéha verb stem shows features commonly associated with word-building. I suggest that incorporation is not a special operation and exists as part and parcel of a word-building mechanism applying to heads within the VoiceP. I then propose that all verbs with a theme internal argument must incorporate. I argue that this is the logical extension of previous work on incorporation (specifically DeCaire et al., 2017), and I show that it predicts the appearance of "dummy" incorporated nouns appearing in certain verbs when no root appears to be incorporated (Baker, 1996; Lounsbury, 1953; Michelson and Doxtator, 2002) . Importantly, I will suggest that internal argument-selecting V *must* merge with a nP in Kanien'kéha, and therefore all apparent "themes" that are not nPs are not true theme complements of V. I show that this stipulation, along with word-building, gives the incorporation facts for free, correctly predicting the size of incorporated material motivated in §3 as well as the appearance of dummy roots with excorporated "themes" and null *pro* "themes." I more fully flesh out the introduction of non-nP apparent "themes" in the next section.

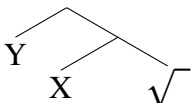## 4.1   Creation of the verb stem via word-building

Focusing on the verbal stem, I will propose that Kanien'kéha has a morphological word-building mechanism that applies within the domain of the VoiceP. This word-building mechanism applies to consecutive heads, thus exhibiting Mirror Principle (Baker, 1985) effects and ordering characteristic of a crosslinguistically common VoiceP. I remain agnostic in this work as to which of several recent proposals (e.g., Arregi and Pietraszko, 2021; Compton and Pittman, 2010; Harizanov and Gribanova, 2019; Svenonius, 2016) may capture this mechanism, suggesting that many may account for these properties.

4.1.1   Mirror Principle effects

Baker's (1985) Mirror Principle is often taken as a common crosslinguistic property of morphological word-building.

(52)   *The Mirror Principle (Baker, 1985:375)*
       Morphological derivations must directly reflect syntactic derivations (and vice versa).

Along with some analogue of the Head Movement Constraint (Travis, 1984), the Mirror Principle, as stated in (52), has the important corollary that m(orphological)-words spell out consecutive heads, with the morphology appearing closer to the root heading projections closer to the root. More concretely, if an m-word has the morpheme order Root-X-Y or Y-X-Root, X is the head of a lower projection than Y, and the heads Root, X, and Y are consecutive, as shown in (53).

(53)
   Y
         X   √   = Root-X-Y *or* Y-X-Root

Returning to Kanien'kéha, recall the verb template and verbal stem template from §2.2, repeated here as (54) and (55), respectively.

(54)   *Verb template (based on Michelson, 2016 and Mithun, 2017)*
       pre-prenominal prefixes—pronominal prefixes—stem—aspectual suffixes

(55)   *Verbal stem template (Michelson, 2023; Mithun, 2017)*
       SRFL/REFL – incorporated root – NMLZ – verb root – derivational suffixes

The expanded template of derivational morphology is in (56).

(56)   *Expanded derivational template (Michelson, 2023; Mithun, 2017)*
       INCH/REV − CAUS − INSTR − BEN − DIST − PURP

Under the dual assumptions of the Mirror Principle (Baker, 1985) and some version of the Head Movement Constraint (Travis, 1984), one should expect that if the Kanien'kéha verbal word (or at least a portion of it) is an m-word, the morphemes should obey common crosslinguistic ordering. Then we should expect the tree in (57) to be crosslinguistically common.

(57)
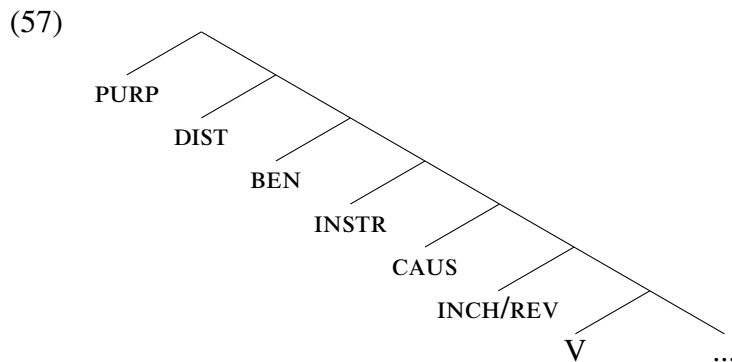
I argue that indeed it is, using this as evidence that derivational morphology form an m-word with the verb.

Beginning at the bottom, there is evidence that reversative and inchoative morphology are crosslinguistically very close to the root (Hale and Keyser, 2002; Harley, 2008). Previous formal proposals like Alexiadou and Anagnostopoulou, 2004 have argued that inchoatives involve a v_{BECOME} that merges directly with a stative or adjectival root. Given that v has been taken to bear features relating to eventivity (e.g., Harley, 1995), it should affect the lexical aspect of the root. This is transparent in inchoatives, where the lexical stative aspect of a root is given an eventive lexical aspect upon the merge of v_{BECOME}. Besides the intuitive sense that material altering lexical aspect should be introduced close to the verb root, many languages have inchoatives that are spelled out with the verb in a single morpheme (such as Greek and English; Alexiadou and Anagnostopoulou, 2004). Material that spells out as a single morpheme must be local enough to do so under most theories of spell out, and thus there is crosslinguistic evidence that inchoatives, and more generally material that alters the lexical aspect of roots, is introduced by functional material extremely close to the root.

While not much formal work appears on reversative suffixes in general, reversatives appear directly next to the verbal root in descriptions of Temne (Atlantic Niger-Congo; Kanu, 2009), Tommo So (Dogon; McPherson, 2013), and Swahili (Bantu; Ngonyani and Ngowa, 2016). Reversatives in Kanien'kéha have two readings. One is, as the name suggests, a reading in which the event denoted by the verb is undone. This is shown in (58).

(58) *Context: Your niece is five or six and is losing teeth left and right. Your neighbor stops by and asks what's happening in your family.*
      Kheionhwatèn:'a wa'onteno'tsiotá:ko'.
      khe-ionhwaten-'a wa'-ion-ate-no'tsi-ot-a-**kw**-'
      1SG>FI-niece-DIM FACT-FIA-SRFL-tooth-stand-JR-REV-PUNC
      'My niece lost a tooth.'   (McDonald, 2023)

Here, the verb *ot* typically denotes the state of something standing upright, here the tooth being had upright in the niece's mouth. With the addition of the reversative *-kw*, however, the event now denotes the undoing of this standing upright. In other words, the complex verb *otakw* denotes something being un-upright.

The second reading of the reversative may instead introduce the semantics of culmination. In (59), the addition of the reversative *-kw* to the verbal root *wennahnot* 'read', results, not in the act of un-reading something, but rather in the idea of a completion of the event of reading. I take this as an example of the reversative altering the lexical aspect of the root.

(59)   *Wa'kewennahnotá:ko.*
       wa'-ke-wennahnot-a-**kw**-'
       FACT-1SGA-read-JR-REV-PUNC
       'I finished reading it.' (⇒ I'm done for good.)   (Gatchalian, 2024)

Examples of the reversative resulting in a culminating reading of the event, like in (59), suggest that the reversative may alter the lexical aspect of a root. As with inchoatives, low functional heads are expected to impact the lexical aspect of the roots, and so examples like (59) provide additional evidence that reversatives are similar to inchoatives in being low functional heads. I then suggest that the verb and the inchoative and reversative suffixes follow the Mirror Principle in that the morphology spelling out a low functional head affecting the lexical aspect of roots (likely *v*; Harley, 2008) appears immediately next to the verb root.

Note that state-denoting roots like *hnihr* 'hard' may immediately combine with the inchoative suffix (as predicted above), and may also directly combine with the causative suffix as well.

(60)   a.   *Wa'ohníhra'ne'.*
            wa'-io-hnihr-a-**'n**-e'
            FACT-NP-hard-JR-INCH-PUNC
            'It hardened./It solidified.'

       b.   *Wa'khnì:rate'.*
            wa'-k-hnihr-a-**t**-e'
            FACT-1SGA-hard-JR-CAUS-PUNC
            'I tightened it./I made it hard.'   (McDonald, 2023)

This follows a common crosslinguistic alternation of verbs between anticausative/inchoative forms and causative forms (Alexiadou and Anagnostopoulou, 2004; Alexiadou, Anagnostopoulou, and Schäfer, 2006, 2015). This alternation has led to proposals that causative morphology spells out a v_{CAUS} which introduces the semantics of causation (Alexiadou, Anagnostopoulou, and Schäfer, 2006; Pylkkänen, 2008). Assuming the inchoative and causative morphemes are both "flavors of *v*" (Folli and Harley, 2004), the ability of stative roots to combine with either directly immediately follows. Stative roots like *hnihr* 'hard' are aspectually restricted to the stative aspect, as their name suggests. When combined with an inchoative or causative suffix, these roots become stems permitting aspectual alternations, which suggests that the inchoative and causative suffixes act as eventivizing morphemes, creating an event out of a state. This is exactly the role *v* is proposed to play, and thus causative and inchoative suffixes exhibit hallmarks of *v*. The verbalizing *v* is taken to be the first functional projection in the verbal spine, and thus if the Kanien'kéha verbal stem displays Mirror Principle effects, the inchoative and causative should occur as the closest suffixes to the verb. This is borne out in the derivational template in (56).

Additionally, Kanien'kéha causatives exhibit a common crosslinguistic restriction. Only unaccusatives may exhibit causative morphology (61a), while unergatives (61b) and transitives (61c) are barred from use of the causative suffix (Baker, 1996).

(61)   a. ✓*Causative of unaccusative*
           Wa'tha'sharà:tsionste'.
           wa'-t-h-a'shar-a-'tsion-**st**-e'
           FACT-DUP-MsGA-knife-JR-dirty-CAUS-PUNC
           'He made the knife dirty.'   (Baker, 1996:25, K.)

       b. ✗*Causative of unergative*
           *Okwirà:ke   wahakeráthenhte'.
            o-kwir-a-'ke   wa'-hake-rathen-**ht**-e'
           NP-small.tree-JR-LOC FACT-MsG>1sG-climb.up-CAUS-PUNC
           Intended: 'He made me climb up the tree.'   (Baker, 1996:352, K.)

       c. ✗*Causative of transitive*
           *Kà:sere wa'onkhní:nonhte'.
            ka-'sere wa'-ionk-hninon-**ht**-e'
           NA-car FACT-FI>1sG-buy-CAUS-PUNC
           Intended: 'She made me buy the car.'   (Baker, 1996:351, K.)

This is expected of causatives that are verb- or root-selecting in the terminology of Pylkkänen (2008). These causatives are lower than Voice and high Appl projections, and thus cannot appear on unergatives and transitives which both contain Voice projections (see also Nie, 2020 for a similar yet different analysis from Pylkkänen, 2008). Other argument-increasing morphology then should appear in projections above the causative projection. Note that the other valency-increasing morphology, the benefactive and instrumental suffixes, appear outside of the causative suffix. Then the template of causative and applicative morphology matches the syntactically predicted ordering of heads, clearly respecting the Mirror Principle.

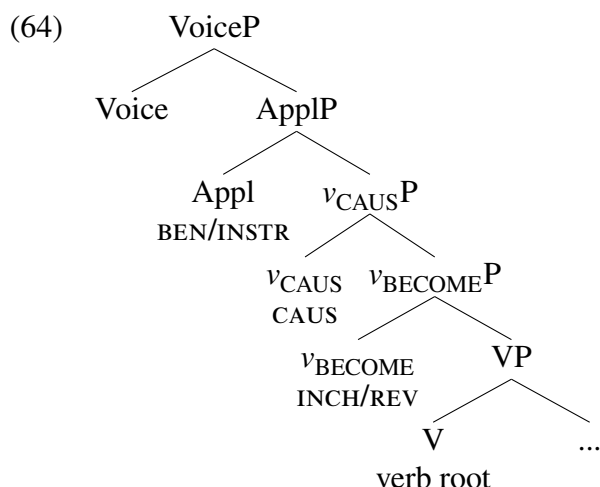Applied arguments in Kanien'kéha appear with an overt benefactive suffix, as in (62a).

(62)   a. *Sá:k tahakwataweià:ten'.*
           Sak t-a'-hakw-ataweia't-**en**-'
           Sak CIS-FACT-MsG>1sG-enter-BEN-PUNC
           'Sá:k broke in on me.'   (Baker, 1996:196, K.)

       b. *Tehsatáweia't!*
           te-hs-ataweia't
           CIS-2sGA-enter
           'Come in!'   (McDonald, 2023)

The verb root *ataweia't* 'enter' is typically a one-place predicate displaying intransitive agreement as in the command in (62b). However, the addition of the benefactive suffix *-en* in (62a) allows the addition of an applied argument to the event of entering. This is marked in (62a) via transitive agreement, with the applied first person singular object being treated as the lower argument of the transitive prefix *hakw-*. Note that the benefactive is a "high applicative" (in the terminology of Pylkkänen, 2008) since it may appear with independently diagnosed unergative verbs like *io'ten* 'work' (Baker, 1996; Pylkkänen, 2008).
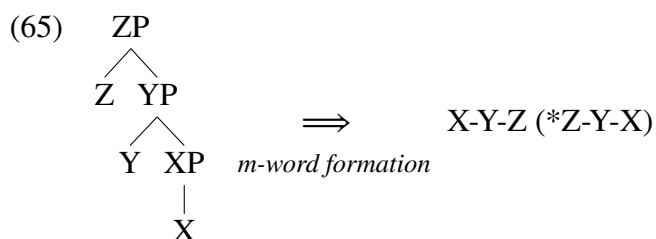
(63)   *Enhiió'tenhse'.*
       en-hi-io'ten-**hs**-e'
       FUT-1sG>MsG-work-BEN-PUNC
       'I will work for him.'   (Deering and Delisle, 1976:427, K.)

Valency-increasing operations like high applicatives and instrumentals require an event to modify (see Pylkkänen, 2008). Therefore in order for the semantics to correctly compose, a state-denoting root must be made an event to appear with applied arguments. This predicts that high applicatives and instrumentals must occur in projections higher than eventivizing morphology like the inchoative. The Mirror Principle then suggests that the order INCH-INSTR/BEN should be the correct ordering, and indeed this is the attested order in (56).[17]

The verbal stem then clearly instantiates a crosslinguistically common verbal spine (64), exponed by morphemes showing clear Mirror Principle effects.[18]

(64)

```
                    VoiceP
                   /      \
               Voice      ApplP
                         /     \
                     Appl      v_CAUS P
                   BEN/INSTR   /      \
                          v_CAUS   v_BECOME P
                           CAUS    /        \
                              v_BECOME      VP
                              INCH/REV      /  \
                                           V    ...
                                        verb root
```

Further, it has been claimed in multiple theories of morphological word-building (e.g., head movement; Baker, 1985; Banerjee, 2019; but also more recent proposals, such as spanning; Svenonius, 2023) that bundling of heads to build m-words results in mirror exponence. This means that the surface realization of the m-word is linearized beginning with the lowest head followed by the next highest and so on. This is schematized in (65), where if X, Y, and Z are heads that form an m-word together, they linearize from bottom up.

(65)

```
        ZP
       /  \
      Z   YP                ⟹         X-Y-Z (*Z-Y-X)
         /  \
        Y   XP       m-word formation
            |
            X
```

---

[17] For the present purposes, the discussion on the verbal stem has been sufficient to show clear Mirror Principle orderings, although I have not considered every derivational morpheme. As a brief note, these, too, appear to show Mirror Principle orderings; the distributive clearly acts as some sort of pluractionality operator taken to modify events (Dayal, 2011; Henderson, 2017; Lasersohn, 1995; Van Geenhoven, 2004). This would place it somewhere above E(vent)P as argued by, e.g., Travis (2010) and Crippen (2019), and thus distributives should appear outside of argument-adding morphology. This is shown to be true in the template (56).

[18] Note that Iroquoian languages exhibit no voice changing alternations (Koenig and Michelson, 2015; Mithun, 2006), but things like reflexivity and anticausativity, appearing to be correlated with Voice in other languages (see, e.g., Akkuş and Paparounas, 2024; Boles, 2023), are encoded with the semireflexive and reflexive morphemes occurring immediately before the verb stem. I remain agnostic as to whether this suggests that Voice is higher than Asp in Kanien'kéha.

Note that the Northern Iroquoian derivational and aspectual morphology argued to show the Mirror Principle effects of morphological word-building are all suffixal and appear in reverse order of their proposed height in (64), with the verb root appearing first, followed consecutively by each head, ending with the aspectual suffix. This is expected under the principle of mirror exponence in the building of m-words, and thus I take the linearization order of morphemes in the verbal stem as clear evidence of morphological word-building.

Additionally, as in the tree in (64), these Mirror Principle effects are limited to the VoiceP domain. I therefore posit that the VoiceP is the domain for morphological word-building in Kanien'kéha. This corresponds to the verbal stem in Northern Iroquoian descriptive literature as well, suggesting that the VoiceP domain is a good candidate for such an apparatus.

4.1.2   Morphophonological evidence: The joiner vowel and Gayogoho:nǫʔ consonants

Additional evidence that the Kanien'kéha VoiceP is the domain of morphological word-building comes from the morphophonological interface. It has been argued that Kanien'kéha has three epenthetic vowels: *i*, *e*, and *a* (Michelson, 1988). Crucial for the present purposes is the epenthetic *a*, which has been glossed (and will continue to be) based on the traditional Iroquoian name "joiner" or "linker" vowel.

While apparently epenthetic in a similar way as the other epenthetic vowels in Northern Iroquoian, the joiner has a more restricted appearance. First, it appears between morphemes where the first morpheme ends with a consonant and the following begins with a consonant, *even if* these two consonants would typically create a well-formed cluster.[19] Second, the joiner inserts only between incorporated nouns, the verb root, and derivational suffixes. For example, in (66), the joiner appears between the nominalizer -*hser* and the verb root *nentak* 'stick', as well as between the causative and the instrumental suffixes -*ht* and -*hkw*.

(66)   *ionthiatonhseranentakhtáhkhwa'*
     ion-at-hiaton-hser-**a**-nentak-ht-**a**-hkw-ha'
     FIA-SRFL-write-NMLZ-JR-stick-CAUS-JR-INSTR-HAB
     'wallpaper'   (Michelson, 1988:164, dialect unknown)

I propose that the joiner is so limited in its distribution because it is the result of an operation occurring within the m-word.[20] The domain of joiner insertion lines up exactly with the portion of the verbal word displaying Mirror Principle effects, as well as the portion of the verbal word displaying right adjunction and Mirror Principle effects. Finally, this domain neatly aligns with VoiceP as shown in the tree in (64). I thus take the joiner as another diagnostic that VoiceP is the domain of a general morphological word-building process.

One last argument that VoiceP is the domain of a general word-building mechanism is based on Dyck (2009). She argues that words in Gayogoho:nǫʔ (Cayuga) are phonological phrases (P-phrases) and thus operate as domains for stress assignment, syllabification, and epenthesis. Nevertheless, she argues that Gayogoho:nǫʔ words have a separate internal domain, marked by the ability

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[19]The joiner does not appear before certain morphemes beginning with *h*, even if the morpheme before ends with a consonant. As an example, note that the causative -*ht* does not trigger a joiner after *nentak* in (66), but the instrumental -*hkw* also beginning with *h*, does trigger a joiner after -*ht*.

[20]I do not propose a specific analysis of this operation. It may be a compounding-type morpheme, or it may be a morphophonological interface effect marking the spell out of an m-word.

to license extrasyllabic consonants. She argues that these smaller domains are phonological words (Pwds) internal to the bigger Gayogoho:nǫʔ word (i.e., the bigger P-phrase).

She argues that both incorporated roots and verb roots correspond to Pwds, assuming that lexical stems constitute Pwds. However, this assumption requires her to make an exception: while most Pwds license initial extrasyllabic consonants, the Pwd boundary between incorporated roots and verbal roots does not. I argue that this instead suggests that incorporated roots and verb stems correspond to a singular Pwd domain. The benefit of this is that there is independent evidence from Gayogoho:nǫʔ that the incorporated root, verb root, and derivational/affixal morphology in Northern Iroquoian correspond to a special domain inside of the larger verbal word. I suggest that the existence of such a domain comes about as part of the morphological word-building mechanism.

I remain agnostic in this work as to which of several recent theories may capture this word-building mechanism. Proposals such as Harizanov and Gribanova's (2019) Amalgamation, Arregi and Pietraszko's (2021) Generalized Head Movement, or Svenonius's (2016) Spanning approach are adequate models of the word-building I am proposing here. It could also be captured via Compton and Pittman's (2010) phases-as-words, in which the VoiceP phase corresponds to a word. The crucial properties that the successful word-building mechanism must display are (a) the linearization of successive heads bottom up, (b) the visibility of morpheme boundaries internal to the verb stem for joiner insertion, and (c) the insertion of each head's Vocabulary Item individually, rather than the insertion of a portmanteau Vocabulary Item that simultaneously spells out the features of all heads involved in the morphological word-building process. As far as I can tell, all four of the above proposals are able to derive these properties and therefore are adequate for the morphological word-building I suggest here. Due to my agnosticism of the exact mechanism, in the remainder of this work I place subscript Ws on the heads that participate in the building of an m-word together rather than represent any of these proposals precisely.

4.2   Incorporation via general word-building

After the brief interlude about the verb stem, I now return to incorporation. Using the word-building mechanism of the verb stem I motivated in §4.1, I will suggest that incorporation is simply the application of this mechanism to the entirety of VoiceP, including any nP internal argument that merges with V. In this sense, I suggest that the unmarked nature of incorporation is not surprising. Rather, incorporation is simply the morphophonological realization of a morphological word-building process as must happen with complex words elsewhere, and thus the default way to reference transitive events.

4.2.1   Situating incorporation as morphological word-building

In order to propose that incorporation can be subsumed under the more general morphological word-building I suggested for the verb stem, I will endeavor to show that the properties argued to instantiate morphological word-building in the verb stem extend directly and straightforwardly to incorporation. First, if incorporation is part of the general word-building mechanism, it should show Mirror Principle effects of morpheme ordering in the way that derivational suffixes do. This is indeed borne out. V must merge with nPs (see §3), and thus if the nP complements of V form an m-word with V (as well as the rest of the verbal stem) the surface morpheme order should reflect that n is closer to the incorporated root than the verbal root, and as such the morpheme ordering

should show the instantiation of n appearing between the incorporated root and the verbal root. Additionally, the morphological word-building mechanism linearizes heads bottom up, which has been argued to be another property of morphological word-building. The expected order is then Root-n-V, and this matches what is found. The incorporated root always comes before the verb root (67a), and when an overt nominalizer appears, it intervenes between the incorporated root and the verbal root (67b).

(67)   a.   *Context: You slaved in the kitchen all day yesterday making bread. You came home today to find it gone with your roommate looking full and happy. They ask why you're angry.*
          Thetén:re' wa'kena'tarón:ni   tánon' akwé:kon wà:seke'.
          thetenre'   wa'-ke-**na'tar**-onni   tanon' akwekon wa'-hse-k-e'
          yesterday   FACT-1SGA-bread-make[PUNC] and   all   FACT-2SGA-eat-PUNC
          'Yesterday I made bread and you ate it all.'

       b.   *Tó: khiatonhseraié:na.*
          to: k-hiaton-**hser**-a-iena
          let.me 1SGA-write-NMLZ-JR-hold
          'Let me hold this book!'   (McDonald, 2023)

Second, the joiner vowel may appear between the verb root and the incorporated root (68a), as well as between the verb root and the overt nominalizer (68b), and between the incorporated root and the overt nominalizer (68c), potentially between .

(68)   a.   *Joiner between incorporated root and verbal root*
          Wa'kenaktahní:non'.
          wa'-ke-nakt-**a**-hninon-'
          FACT-1SGA-bed-JR-buy-PUNC
          'I bought a bed.'   (Baker, 1996:12, K.)

       b.   *Joiner between overt nominalizer and verbal root*
          Context: Your brother is at work and needs keys to get into the building. However, he forgot his keys and calls you asking if you can get them for him. You ask him where the keys are.
          Akwatekhwahrahtsherà:ke   kanhotonkwa'tsheráhere'.
          akw-atekhwahra-htsher-a-'ke ka-nhotonkwa-'tsher-**a**-her-e'
          1SGP-table-NMLZ-JR-LOC   NA-key-NMLZ-JR-on-PUNC
          'The keys are on my table.'   (McDonald, 2023)

       c.   *Joiner between incorporated root and overt nominalizer*
          Wahatkahrhi'tahtsheratkwé:ni.
          wa'-h-atkahrhi't-**a**-htsher-atkweni
          FACT-MSGA-manipulate-JR-NMLZ-win[PUNC]
          'He won a (finger) toy (i.e., a toy involving fine motor skills).'   (McDonald, 2023)

Following the argument that the joiner vowel is a marker of morphological word-building, the appearance of the joiner between the incorporated root (i.e., root of V's complement), n, and V lends support to an analysis where the heads inside the nP complement of V also undergo morphological word-building with V and the rest of the heads inside the VoiceP.

4.2.2 Incorporation "stranding" modifiers

A prediction of the proposal that incorporation is simply a part of morphological word-building is that non-head modifiers of theme nPs should be "stranded" by incorporation. Morphological word-building is commonly assumed to involve only heads (as I have implicitly assumed in this discussion so far) and thus material that modifies the nP should be stranded when the root of the nP and the n head undergo the formation of the m-word with the rest of the heads in the VoiceP.

I will show that stranding of modifiers by incorporation operates exactly as predicted with relative clauses and "adjectival" modifiers. Kanien'kéha has both headed and headless relative clauses. These often occur with the overt relative pronoun *tsi niká:ien* 'that which' (Baker, 1996). An example of each of these is below, where the relative clause is bracketed in the morpheme breakdown line.

(69)   a. *Headed relative clause*
         Atià:tawi tsi niká:ien í:kehre'   *akhní:non'*
         [atia'tawi tsi nikaien i-k-ehr-e'   a-k-hninon-']
          dress   C which   EP-1SGA-want-PUNC OPT-1SGA-buy-PUNC
         kahontsínion.
         ka-hontsi-nion
         NA-black-DIST[STAT]
         'The dress I want to buy is black.'   (Baker, 1996:163, K.)

    b. *Headless relative clause*
         Tsi niká:ien ne wahiiahtahkónnien'   *rotshennón:ni.*
         [tsi nikaien ne wa'-hii-ahta-hkw-onni-en-']   ro-atshennonni
          C   which   NE FACT-1SG>MsG-shoe-NMLZ-make-BEN-PUNC MsGP-happy[STAT]
         'The one who I made shoes for is happy.'   (Baker, 1996:163, K.)

The most common relative clauses, however, are those appearing as fully inflected verbal forms. Baker (1996) terms these "pseudonominals," since they appear to be just a matrix verbal form, but instead receive a relative clause interpretation. To illustrate, the bracketed clause in (70a) is interpreted as a subject relative clause, but this same verb is also a well-formed matrix sentence (70b).

(70)   a. [*Ratonkária'ks*]   *wahakhró:ri'.*
         r-atonkaria'k-s   wa'-hak-hrori-'
         MsGA-hungry-HAB FACT-MsG>1SG-tell-PUNC
         'The hungry man told me.' (*Lit.:* 'The one (male) who is hungry told me.')   (Baker, 1996:165, K.)

    b. *Ratonkária'ks.*
         r-atonkaria'k-s
         MsGA-hungry-HAB
         'He is hungry.'   (McDonald, 2023)

Baker (1996) shows that these pseudonominals are truly relative clauses as the intended relativization spots of these pseudonominals must obey island constraints, and thus must involve some null operator movement. For example, (71) fails to have a well-formed pseudonominal relative clause since the intended relativization point—*anitskwahra* 'chair'—is inside a temporal adjunct.

(71) ??*Onwá:ri ienòn:we's   thí:ken wa'koniateró:roke'   tsi nikarì:wes*
      Onwari   ie-nonhwe'-s [thiken wa'-koni-ate-rorok-e'   tsi nikarihwes
      Onwari   FIA-like-HAB this   FACT-1SG>2SG-SRFL-collect-PUNC while
      wahsanitskwahrahtsherón:ni'.
      wa'-hs-anitskwahra-htsher-onni-']
      FACT-2SGA-chair-NMLZ-make-PUNC
      Intended: 'Onwá:ri likes the chair that I watched you while you made.' (Baker, 1996:170,
      K.)

Lastly, relative clauses (with overt relative pronouns or pseudonominals) may also be internally-headed (Baker, 1996). In (72), the head of the relative clause is *a'ther* 'basket'. However, this head appears as the incorporated object of the verb *inside* the relative clause although it serves as an argument of the matrix verb *atkatho* 'see'.

(72) *Ra'therón:ni'*   *wa'katkátho'.*
      [r-**a'ther**-onni-']   wa'-k-atkatho-'
      MSGA-basket-make-PUNC FACT-1SGA-see-PUNC
      'I saw the basket he is making.'   (Baker, 1996:167, K.)

With this background on relative clauses in mind, it can be seen that incorporation does in fact "strand" relative clauses that modify the incorporated noun (Baker, 1996; Barrie, 2015).

(73) *Tié:r rahstaro'kwanòn:we's*   *ne wa'katathní:non'se'.*
      Tier ra-**hstaro'kw**-a-nonhwe'-s   [ne wa'-k-atat-hninon-'s-e']
      Tier MSGA-necklace-JR-like-HAB NE FACT-1SGA-REFL-buy-BEN-PUNC
      'Tié:r likes the necklace that I bought myself.'   (McDonald, 2023)

In (73), the theme *hstaro'kw* 'necklace' has been incorporated into the verb, appearing linearly disjoint from the relative clause (bracketed) that modifies it. This is predicted under a proposal where incorporation is a by-product of a general morphological word-building process as in (74).[21]

(74) = *(73)*

_____
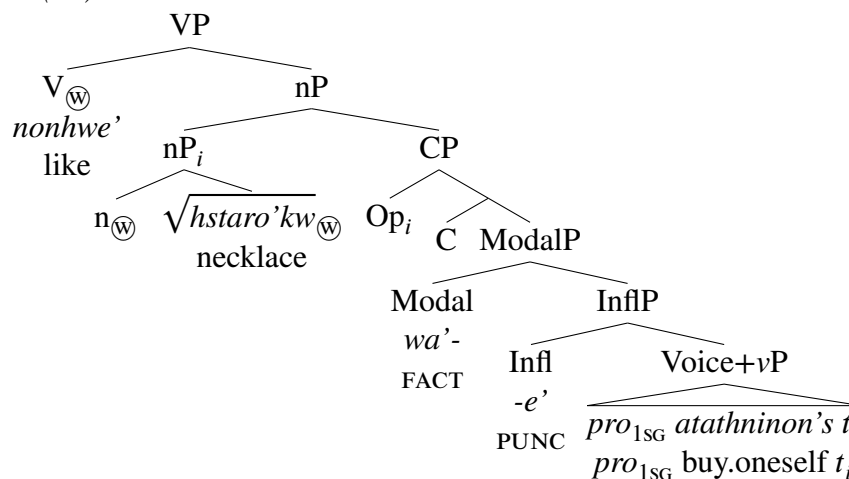
[21]I place the factual *wa'-* in some high modal projection, but this is simply for completion; I make no claims about the location of the factual prefix. I additionally make no claims about where the final landing site for the subject is. I therefore leave it in Spec,Voice+*v*P.

I adopt the operator movement approach to relative clauses (to be motivated below) in which an operator is merged in the gap of the relative clause—here the theme complement of the verb *atath-ninon's* 'buy oneself'—and undergoes A'-movement to Spec,CP; that is, the head noun is not generated inside of the relative clause, but rather coindexed with a relative clause-internal operator (see Bhatt, 2002 and sources therein). The operator is then coindexed with the nP it merges with. As the subscript ⓦs suggest, the root *hstaro'kw* 'necklace', its nominalizing n head, and the verb root *nonhwe'* 'like' form an m-word during the morphological word-building process. This results in the theme root being linearized first, followed by the null n, and then the verb root—as *hstaro'kwanonhwe'*. Due to the morphological word-building mechanism and the corresponding linearization, the incorporated nP appears stranded from its relative clause modifier by the exponents of n, V, and higher heads in VoiceP. Note that in the account sketched here, the relative clause is not "stranded" in the syntactic sense; within the narrow syntax the incorporated nominal and its modifying relative clause are clearly adjoined. It is the operation of the word-building mechanism and its corresponding linearization that results in the appearance of the incorporated nominal as separate from the relative clause. Still, the apparent "stranding" facts are as such easily derivable from incorporation being a part of the general word-building mechanism.

Nevertheless, the stranding facts only follow under an operator-movement approach to relative clauses. It is entirely unclear how the word-building mechanism predicts stranded modifiers under an analysis where the incorporated theme is generated *internal* to its modifying relative clause and undergoes some combination of A- and A'-movement to raise either to Spec,CP of the relative clause or to the object position of the matrix verb. There is evidence, though, that an operator analysis of relative clauses is the correct one in this case.

If incorporated themes modified by relative clauses originated within their modifying relative clauses, it would be expected that they would be restricted in what types of relative clauses they may be modified by. More specifically, incorporated roots should not be able to be modified by internally-headed relative clauses because they have moved out of the relative clause and thus have left a trace in argument position. However, this is not the case.

(75) *Tié:r rahstaro'kwanòn:we's   ne wa'katathstaro'kwahní:non'se'.*
      Tier ra-**hstaro'kw**-a-nonhwe'-s   [ne wa'-k-atat-**hstaro'kw**-a-hninon-'s-e']
      Tier MsGA-necklace-JR-like-HAB NE FACT-1sGA-REFL-necklace-JR-buy-BEN-PUNC
      'Tié:r likes the necklace that I bought myself.'   (McDonald, 2023)

Example (75) is a minimal pair with (73). However, in (75), the relative clause that modifies the incorporated object of the matrix verb is internally-headed, with the head *hstaro'kw* appearing incorporated in both the matrix verb and in the verb in the modifying relative clause. An account in which the matrix incorporated root begins in the relative clause, but moves out and leaves a trace, cannot account for the ability of the matrix incorporated object to be modified by an internally-headed relative clause.

Additionally, the incorporated object can be modified by conjoined relative clauses, as in (76), where the incorporated matrix object *anihsonhsawi* 'ring' is simultaneously a ring that Katerí:'s grandmother made and a ring that her mother used to show off.

(76) *Katerí: wa'onnihsonhsawi'tsheraié:na'   ontathsóhta'   wa'akón:ni*
      Kateri   wa'-ion-anihsonhsawi-'tsher-a-iena-' [ontat-hsohta'   wa'-iak-onni
      Kateri   FACT-FIA-ring-NMLZ-JR-hold-PUNC   FI>FI-grandparent FACT-FIA-make[PUNC]
      shiieksà:'a   tánon' ontate'nisténha' iaon'weskwaníhahkwe'   ne
      shi-ie-ksa-'a]   tanon [ontate-'nistenha' ia-on'weskwani-hahkwe' ne
      COINC-FIA-child-DIM and   FI>FI-mother   FZsGP-enjoy-REM.PST   NE
      iakotenaiéhston.
      iako-ate-naie-hst-on]
      FIP-SRFL-vain-CAUS-STAT
      'Katerí: inherited the ring that her grandmother made when she was a kid and that her
      mother liked to show off.'   (McDonald, 2023)

This is not so surprising under an analysis where the incorporated matrix object moves out of
the relative clause, as this may be a case of simple across-the-board movement. However, the
incorporated matrix theme can be modified by conjoined relative clauses, where one relative clause
is internally-headed and the other is headless (77).

(77) *Context: In high school, there was an abandoned building somewhere in the forest where
      kids would go hang out. However, they kept the location secret so they would be cool and
      no one could find it, even though everyone was talking about it. Me and my friends went
      out searching and finally found it.*
      Wa'akwanonhsatshén:ri   akwé:kon ne rotitharáhkwen   tánon'
      wa'-iakwa-nonhs-a-tshenri   [akwekon ne roti-thar-a-hkw-en]   tanon'
      FACT-1PL.EXCLA-house-JR-find[PUNC] all   NE MPLP-talk-JR-INSTR-STAT and
      iakwanonhsíhsaks.
      [iakwa-nonhs-ihsak-s]
      1PL.EXCLA-house-look.for-HAB
      'We found the building everyone's talking about and we've been looking for.' (McDonald,
      2023)

Importantly, the incorporated object is the same entity modified by both relative clauses. More
explicitly, the incorporated matrix object *nonhs* 'house, building' is a place that everyone has been
talking about *and* we have been looking for that same place. A movement account would have
to posit movement of the matrix incorporated object out of only one relative clause in this case,
violating island constraints. As in (78), the Coordinate Structure Constraint is indeed active in
Kanien'kéha, with neither the first nor second conjuncts available to be *wh*-questioned.

(78) a. **Oh   nahò:ten   tánon' anihsónhsawi wahshé:ion'   ne Á:nen?*
          oh   nahohten [*t* tanon' anihsonhsawi] wa-hshe-ion-'   ne Anen
          what.PRT what   and   ring   FACT-2SG>FI-give-PUNC NE Anen
          Intended: 'What did you give Á:nen and a ring?'
      b. **Oh   nahò:ten ate'wáhsare' tánon'   wahshé:ion'   ne Á:nen?*
          oh   nahohten [ate'wahsare' tanon' *t*] wa-hshe-ion-'   ne Anen
          what.PRT what   earring   and   FACT-2SG>FI-give-PUNC NE Anen
          Intended: 'What did you give Á:nen earrings and?'

Then it is hard to see how an approach involving the base generation of the matrix incorporated object inside of its modifying relative clause can conveniently account for the data. I take these facts to suggest an operator approach as outlined above. In §5, I will offer a more concrete analysis of how internally-headed relative clauses may be accounted for by an operator movement proposal for relative clauses. Since independent data supports the operator movement derivation of relative clauses, the derivation in (74) immediately predicts the stranding behavior of incorporated roots, as one would expect under an analysis where incorporation is simply a part of a more general morphological word-building process.

A small note is in order for "adjectival" modifiers. Incorporation also strands "adjectival" modifiers, as in (79) (Baker, 1996; Barrie, 2015).

(79)   *Aséhtsi   enienaktanòn:we'ne'.*
       ase-htsi   en-ie-nakt-a-nonhwe'n-e'
       new-INT FUT-FIA-bed-JR-like-PUNC
       'She will like the new bed.'   (Baker, 1996:308, K.)

Here, the incorporated root *nakt* 'bed' is modified by a verb-external modifier *asehtsi* '(brand) new'. However, it has been often noted that Northern Iroquoian languages do not have a class of adjectives, but rather all purported adjectives are simply verbs (Chafe, 2012; Michelson, 2023). In this case, I propose the "adjectival" modifiers as in (79) are also relative clauses, so that the translation of (79) is more akin to 'She will like the bed that is new.' Then the stranding of "adjectival" modifiers is simply a special case of stranding of relative clauses, which, as I argued above, follows directly from an account where incorporation is the application of the morphological word-building mechanism to the nP complement of V.

### 4.2.3   Deriving the pragmatic neutrality of incorporation

Having shown that the previous diagnostics for morphological word-building in the verb stem directly apply to the incorporated root and nominalizer, I have proposed that incorporation is directly derivable by the application of a general morphological word-building operation to heads inside the VoiceP, *including* nP complements of V.[22] As I have also shown, this reduction of incorporation to a more general VoiceP-bound morphological word-building mechanism can also account for seeming "stranding" behavior of incorporated roots vis-à-vis their modifying relative clauses.

Note that the central point in DeCaire et al., 2017 comes for free under this analysis. DeCaire et al. (2017) convincingly show that incorporation is the pragmatically neutral way to describe events with internal arguments, while other options are pragmatically marked in some way. They argue that this arises because themes are always generated inside the verbal complex and may only exist outside of the verb if they move out of it for information-structural reasons. In other words, incorporation is the basic state of affairs while any unincorporated theme is actually excorporated. The proposal of morphological word-building here allows for both the unmarked pragmatics of incorporation and a structure that on the surface appears to generate the theme inside of the verb, while still maintaining crosslinguistic commonalities. In fact, both of these immediately follow

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[22]As Svenonius (2023) notes, there seems to be a correlation between incorporation and size and thus the combining of the complement of V with the verbal stem via morphological word-building may be derived by the small nP size of V's complement. I leave for further work how best to model this.

from the proposal. Consider the tree in (80b) showing the VoiceP (bracketed) of the dependent verb *ahi'serehtóhare'se'* in (80a).

(80) a. *Wahakéhnha'ne'*   *ahi'serehtóhare'se'*   *ne Wíshe.*
          wa'-hake-hnha'n-e'   a-[hi-'sere-ht-ohare-'s]-e'   ne Wishe
          FACT-MSG>1SG-hire-PUNC OPT-1SG>MSG-car-NMLZ-wash-BEN-PUNC NE Wishe
          'Wíshe hired me to wash the car for him.'   (McDonald, 2023)

   b.
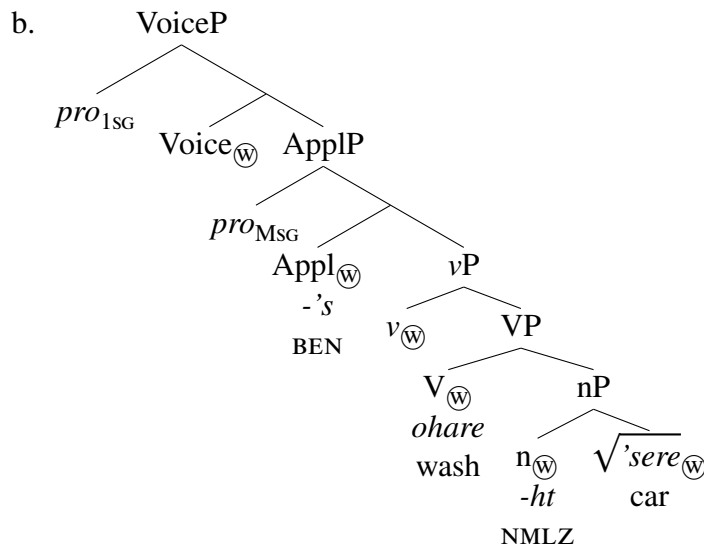
As is crosslinguistically standard, the theme, here *'sere* 'car', merges as the complement of V. Crucially, the theme merging in this position does not trigger any pragmatic effects, as is standard of in situ themes crosslinguistically. Later in the derivation, the morphological word-building mechanism combines the heads within the VoiceP—including those of the theme complement of V—into an m-word, as symbolized by the ⓦ subscripts. This m-word follows the properties previously discussed, linearizing the lowest head, thus the incorporated root, first and linearizing consecutive heads to the right. After the attachment of pronominal prefixs to the left of the verb stem (not shown here), the phonology spells out a structure in which the theme appears to be generated internal to the verb, due to the building of the verb stem m-word. The morphological word-building mechanism, as in other more commonly known cases of morphological word-building crosslinguistically (e.g., verbs in Romance), is *obligatory*. This requirement to build an m-word of the heads inside VoiceP is what leads to the "default" nature of incorporation.

Aside from this obligatory morphological word-building mechanism, the tree in (80b) parallels the extended verbal spine found in many other languages. Through this lens, it is clear why this derivation is the default way of expressing an event with a theme. Then the only "exotic" fact about incorporation is the extension of the domain of morphological word-building to the complement of V, but as has been noted previously, languages can vary wildly in what heads end up spelled out in the same morphological word (e.g., Arregi and Pietraszko, 2021). The application of morphological word-building to the extended verbal projection as well as the complement of V is the only factor forcing the surface differences between other NP languages (such as Chinese and Serbo-Croatian; Bošković, 2008; Dayal, 2004) and Kanien'kéha. Then the pragmatic neutrality of incorporation noted by DeCaire et al. (2017) arises not so much out of incorporation itself, but rather as a by-product of incorporation being the obligatory morphological exponence of a crosslinguistically pragmatically unmarked syntactic structure.

4.3   On the necessity of incorporation

There appear to be cases in Kanien'kéha where no root is incorporated, as in the bolded verb form in (81).

(81)   *Wahatirihwatshén:ri'*   *tsi wa'konwaié:na'*   *ne kahonweia'kó:wa*
       wa'-hati-rihw-a-tshenri-'   tsi **wa'-konwa-iena-'**   ne ka-honwei-a-'kowa
       FACT-MPLA-matter-JR-find-PUNC C   FACT-FI>FZ-hold-PUNC NE NA-boat-NSF-AUG
       tánon'...
       tanon'
       and
       'They found that the ship had been captured and...'   (Horne, 1976b, K.)

The morpheme breakdown of the bolded verb shows that no piece of the verb form corresponds to an incorporated root. In fact, the understood theme of the verb is the unincorporated nominal *kahonweia'kowa* 'ship' occurring outside the verb. Nevertheless, I suggest that there is in fact a null incorporated root in the bolded verb in (81) and therefore that the unincorporated *kahonweia'kowa* is not a theme at all. I propose that *all* verbs with a theme internal argument must incorporate as follows from the obligatory nature of the morphological word-building mechanism. Further, I argue that all verbs with theme internal arguments are generated with an nP complement of V, whether this is overt or not, and therefore that internal argument-selecting V exhibits a selectional requirement for nP in Kanien'kéha.

  Certain verbs in Kanien'kéha do not appear with an overt theme but are understood to have an implied theme, due to agreement, context, and *pro*-drop. Nonetheless, the requirement of the application of the morphological word-building apparatus to the entirety of VoiceP domain should entail that there are cases in which verbs with implied themes should appear with incorporated material. I argue this is exactly the case.

  Certain Kanien'kéha verb roots appear with extra phonological material when no lexical root is incorporated. Two examples are in (82–83), where the (a) examples show these verb roots with incorporated lexical roots and the (b) examples show the same roots without incorporated roots.

(82)   a.   *Context: Storyboard, slide 1. A lizard is awake, sitting on a branch in a tree, and his tail drops (remains attached).*
            Tó:tis tahatáhsen'ne'.
            totis   t-a'-ha-itahs-en'n-e'
            lizard CIS-FACT-MSGA-tail-fall-PUNC
            'The lizard's tail fell.'

       b.   *Context: Your dad keeps sweets in the kitchen. You have to go through the living room to get to the kitchen, but he's sleeping on the couch! As you're sneaking past, you jump as his arm falls onto the floor.*
            Raonéntsha   tòn:sen'ne'   tánon...
            rao-nentsh-a   t-a'-w-**a's**en'n-e'   tánon'
            MSGP-arm-NSF CIS-FACT-NA-fall-PUNC and
            'His arm fell and...'   (McDonald, 2023)

(83)   *Context: Ontkwiraté:ni and I work at a car wash. Wíshe hired Ontkwiraté:ni to wash his car, but he's sick, so I washed Wíshe's car instead.*

a.   *Wahi'serehtóhare'se'*   *ne Ontkwiraté:ni.*
     wa'-hi-'sere-ht-ohare-'s-e'   ne Ontkwirateni
     FACT-1SG>MSG-car-NMLZ-wash-BEN-PUNC NE Ontkwirateni
     'I washed the car for Ontkwiraté:ni.'

b.   *Ì:'i   wa'kenóhare'.*
     i'i   wa'-ke-**n**ohare-'
     1PRO FACT-1SGA-wash-PUNC
     '*I* washed it.'   (McDonald, 2023)

In (82), the verb root 'fall' appears as *en'n* alongside the incorporated root *itahs* 'tail'. In contrast, this same root 'fall' appears preceded by *a's* when no incorporated root occurs.[23] A similar story applies to the root 'wash' in (83). Here, 'wash' has the form *ohare* with the incorporated root (and nominalizer) *'sereht* 'car' but instead with an initial *n* as *nohare* when occuring without any incorporated material.

The above pattern occurs with multiple verbal roots in Kanien'kéha; a list of many can be found in Appendix A.[24] As can be seen in the two examples (82–83) as well as through comparison of the verb forms in Appendix A, the phonological form of the additional material the verb root appears with when no lexical root is incorporated is entirely dependent on the verb. Some verb roots, like *ohare* 'wash', appear with only a small amount of additional material (just *n-*), while others like *en'n* 'fall' appear with extra material that is almost equal in size to the root itself (the three-segment *a's-*).

The crucial observation is that the additional phonological material that appears when no lexical root is incorporated is always immediately pre-verbal. This is exactly the location where the lexical root appears when the verb incorporates a lexical root, that is to say, the lexical incorporated root and the extra phonological material are in complimentary distribution. Building on this intuition, I propose (following Baker, 1996; Lounsbury, 1953, and Michelson and Doxtator, 2002) that these verbs do not exhibit root allomorphy, but instead the additional phonological material appearing when no lexical root is incorporated is instead the overt exponent of a semantically bleached incorporated "dummy" root. I gloss these as 'thing' henceforth.

Additional evidence that this extra phonological material truly expone incorporated roots is the predictable appearance of the joiner. Look at the stem alternation in (84).

(84)   a.   *ienawa's*
            ien-a-wa's
            thing-JR-help.with
            'help someone with'   (McDonald, 2023)

---

[23]Note that in (82b) it is difficult to see the full form *a's* on the surface. This is simply due to a regular phonological rule that turns sequences of *(w)awa* into *on* (Michelson, 1988).

[24]Note that Appendix A is intended for use by learners and as such I refer to forms with extra phonological material as the form of the roots occurring without incorporation. However, as described below, my formal analysis is that the extra phonological material occurring alongside these verbal roots expones semantically bleached incorporated roots, and that this alternation is *not* due to root allomorphy.

b. *rennawa's*
   renn-a-wa's
   song-JR-help.with
   'help someone sing'   (Akwiratékha' Martin, p.c.)

Note that the the final *a* appearing before the verbal root *wa's* does not go away when an lexical root is incorporated into this verb. This suggests that in the dummy root form, *ienawa's*, the dummy root is *ien* since this is the part replaced by the lexical root *renn* in (84b). Recall that the joiner *a* appears between incorporated roots ending in a consonant and verbal roots beginning with a consonant. Then if *ien* were an incorporated root appearing before a verb root beginning with *w*, joiner insertion should be triggered. As seen in (84a), there is indeed an intervening *a* between *ien* and *wa's*. This behavior is exhibited by a large amount of verbal roots in Appendix A, suggesting that the extra phonological material does behave as expected of an incorporated root. This is another argument that these are "dummy" incorporated roots.

While there are verb roots that display the alternation where additional material appears in lieu of an incorporated root, many verb roots display no alternation at all. That is, the form of the verb occurring alongside incorporated lexical roots is the same as the form of the verb when no lexical root is incorporated. Such a verb is *iena* 'hold, catch, grasp, take'. This verb appears twice in (85). In the first instance, no lexical root is incorporated, and in the second, the lexical root *nontsi* 'head' is incorporated. However, the verb root has the same form in both instances.

(85)   *Context: Your niece is having a baby. She's panicking, thinking how she could possibly do this. She says to you she doesn't even know how to hold a baby.*
       Ne enhsheié:na'   *ne owirà:'a*   *ontà:'on*
       ne en-hshe-**iena**-'   ne o-wir-a-'a   onta'on
       NE FUT-2SG>FI-hold-PUNC NE NP-baby-NSF-DIM have.to
       enhshenontsistaié:na'.
       en-hshe-nontsi-st-a-**iena**-'
       FUT-2SG>FI-head-NMLZ-JR-hold-PUNC
       'When you hold a baby, you have to cradle its head.'   (McDonald, 2023)

I follow Baker (1996) in suggesting that even for these verbs that do not exhibit an alternation between forms with incorporated lexical roots and those without, there is a "dummy" incorporated root in the absence of any lexical incorporated root. The only difference between the two classes of verb roots is that the class of roots like *en'n* 'fall' and those listed in Appendix A have an overt morphological exponent for dummy incorporated roots, while the class of roots like *iena* 'hold, carry' do not.
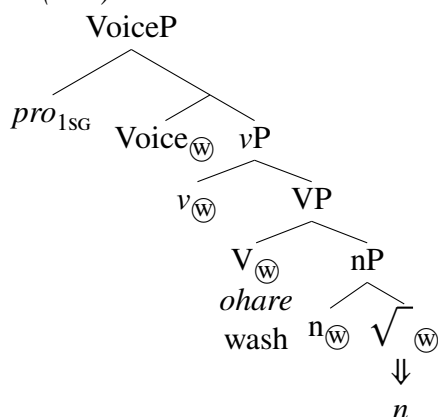
The reasons for my claim are different from Baker's (1996), though. Baker (1996) requires all arguments to be morphologically marked on the verb via either agreement or incorporation in order for them to receive a theta-role as part of his Morphological Visibility Condition. I, however, argue that dummy incorporated roots appear because all V heads that take theme internal arguments must have a syntactic internal argument. A requirement that (di)transitive and unaccusative verbs must merge with a theme internal argument in not strange *per se*; presumably a similar requirement operates in English and is the impetus underlying proposals like the Theta Criterion (Chomsky, 1981).

In light of the requirement for internal argument-selecting Vs to merge with themes, I argue that Kanien'kéha theme-taking V has a selectional requirement for nP, that is, *all* true themes in Kanien'kéha must be nPs, and that all apparent themes that are not nPs are not generated as themes at all. Instead, I will suggest that apparent themes that are not incorporated are instead "stowed away" as the possessors of true themes in the exact same way "raised possessors" are introduced into the derivation.

Note that in some cases where a dummy root is incorporated, no overt "theme" appears at all. Nevertheless, a dummy root is incorporated. As I motivated in §3, incorporated elements are the theme arguments merging with V. This follows directly from the application of the word-building mechanism: all heads inside the domain of VoiceP includes those of the complement of V, resulting in the incorporation of V's complement. Additionally, I also argued that incorporated elements are never larger than nP. Since dummy roots occur when there is no overt "theme", V must still merge with a nP in such cases. Note, however, as in examples such as (82b), where an apparent theme appears outside of the verb, a dummy root still occurs internal to the verb. In this case, theme-selecting V must still merge with a dummy root. Crucially, this means that excorporated "themes" are not generated as themes at all; rather, the dummy root is. Verbs with excorporated "themes" therefore are still required to merge with a nP. Additionally, if excorporated "themes" merged as the internal argument of V, they should be able to incorporate by the word-building mechanism, alongside their agreement prefixes and noun suffixes. Nevertheless, this is impossible, as I have shown in §3.2. Recall that unincorporated nominals have more functional structure than nP.[25] This suggests that the reason that excorporated "themes" may not merge with V as a theme is because they do not satisfy a selectional requirement. I therefore propose that internal argument-selecting V in Kanien'kéha has a selectional requirement for nP complements. Note that while such a selectional requirement must be stipulated, it straightforwardly accounts for the size of incorporated material and the obligatory incorporation of dummy roots if no lexical root is incorporated. Significantly, the nP selectional requirement, along with the word-building mechanism, gives the incorporation facts for free: internal argument-selecting verbs must take a theme nP, which by the word-building mechanism must always incorporate, deriving the facts that incorporated material is always a nP, and that dummy roots appear when an apparent theme (e.g., a *pro* or an excorporated nominal) is present.

Nevertheless, in order for a sentence to be interpretable, the nP complement of V must be semantically compatible with an unincorporated "theme" nominal or *pro*. The solution is an nP with a semantically bleached root. The incorporation of dummy roots follows from the obligatory application of the morphological word-building process to the entirety of the heads within VoiceP. Even in the case of dummy roots, the complement nP of V is required to form an m-word with the other heads in this domain, resulting in the dummy root's incorporation into the verbal complex. This is schematized in the tree in (86).

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[25]See §3.2 and §5.1.1 for more evidence that unincorporated nominals are larger than nPs, as well as a more complete analysis.

(86) = *(83b) wa'kenóhare'*

```
              VoiceP
             /      \
        pro_1SG    /     \
              Voice_ⓦ   vP
                       /    \
                   v_ⓦ     VP
                          /    \
                       V_ⓦ    nP
                      ohare   /   \
                      wash  n_ⓦ  √_ⓦ
                                   ⇓
                                   n
```

In the verb stem depicted in (86), in the presence of a neuter theme *pro* (not shown in the tree), V merges with a nP with a dummy root, satisfying both the constraint that V may only merge with nP and the requirement that verbs with theme internal arguments must have syntactic internal arguments. The root of the nP complement of V cannot be semantically incompatible with the theme neuter *pro*, however, so it is generated as a semantically bleached dummy. The morphological word-building mechanism still applies and forces the incorporation of this dummy root. The dummy root in the case of *ohare* 'wash' spells out as *n*; however, in a tree identical to (86) but where the V is instead *iena* 'hold, carry', the dummy root spells out as null. The requirement of incorporation in all cases is arguably the logical extension of DeCaire et al. (2017), in that the omnipresent nature of incorporation even with dummy themes does imply that incorporation is the default mechanism.

I have therefore argued that all verbs with theme internal arguments must merge with syntactic internal arguments, resulting in a requirement that all verbs with themes must incorporate due to the general application of the morphological word-building mechanism to heads within the VoiceP. I also argued that the behavior of dummy roots and the size of incorporated material is directly predicted by a selectional requirement of internal argument-selecting V, specifically that theme-selecting V in Kanien'kéha must merge with nPs. The question remains: if theme-selecting V must merge with dummy nPs in cases where the apparent theme is a freestanding nominal or *pro*, how are these freestanding nominals and *pros* introduced into the derivation? This is the question motivating the next section.

5   Introducing themes: The stowaway analysis

This section digs into the main proposal of this work: that there is no derivational relationship between incorporated and excorporated variants in Kanien'kéha. Instead, unincorporated theme nominals are introduced in the specifier of the complement nP to V, serving as the inalienable possessor of a semantically bleached dummy root. I will argue that this allows for incorporation of a dummy root to co-occur with unincorporated nominals, while preventing dummy roots from occurring alongside incorporated lexical roots. I suggest this also provides a method for introducing animate themes, which are typically barred from incorporation. I will then extend this proposal in §6, showing how the architecture argued for here correctly predicts seemingly disparate facts.

In this section, I break from incorporation for a brief while to (re-)introduce the structure of freestanding nominals themselves, as well as to motivate a split in alienability for Kanien'kéha

nominals. I then introduce a proposal for the structure of possessor raising in Kanien'kéha, arguing against typical binding and raising accounts of "raised possessors." I then note that the exact structure that leads to possessor raising automatically applies to the case of excorporation. After discussing the derivation of excorporated cases, I discuss how the "stowing away" of excorporated nominals also provides a position for generating animate themes, thus circumventing the restriction on incorporation for inanimates.

5.1 Unincorporated nominals and alienability

5.1.1 The structure of unincorporated nominals

I briefly detailed the structure of unincorporated nominals in §3.2. Here I will give more detail on unincorporated nominals, as well as a more concrete proposal of their structure. Unincorporated nominals in Kanien'kéha consist of up to four parts: an intransitive agreement prefix, the root, a nominalizer, and a noun suffix. The minimal unincorporated nominal consists of only an agreement prefix and a root.[26] An example is *óhses* 'syrup' (87), which consists of the neuter patient prefix *io-* and the root *hses* 'syrup'.

(87) *óhses*
      o-hses
      NP-syrup
      'syrup'   (McDonald, 2019)

Note that the neuter patient prefix *io-* appars without its initial glide in (87). On nouns, agreement prefixes beginning with glides systematically appear without their initial glides. Many roots beginning with *a* appear not to have an agreement prefix due to this process; the neuter agent prefix allomorph before *a* is *w-*, and therefore does not appear, as in *ahthén:no* 'ball'.[27]

(88) *ahthén:no*
      w-ahthenno
      NA-ball
      'ball'   (McDonald, 2019)

As noted in §3.2, the intransitive agreement set (i.e., agent or patient) used for unincorporated nominals depends on the root. It has been said that the agreement set is lexically specified (Baker, 1996; Bonvillain, 1973), though it may index a sort of noun class marking; roots taking agent prefixes tend to be man-made, while those taking patient prefixes are naturally occurring (Barrie and Jung, 2020, McDonald, p.c.). This can be seen in the difference in set between (87) and (88). The root *hses* 'syrup' is an object that occurs naturally, so it uses the patient set for its agreement prefix, while the root *ahthenno* 'ball' represents a man-made innovation, so it uses the agent set.

Additionally, the agreement prefix of the nominal always matches the φ-features of the root's referent. Most nominal roots appear with neuter agreement because most nominal roots refer to

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[26]Some argue that certain idiosyncratic words like *è:rhar* 'dog', consisting of just a root, are the minimal nominals. However, these words are never allowed to take possessive morphology nor may they be incorporated, thus it is hard to determine if these truly instantiate nominals.

[27]While I gloss this agreement prefix in (88), this is simply for explanatory purposes, and I do not gloss the missing prefix elsewhere.

things, which are neuter. However, the difference can be seen in (89) below. The root *ksa* 'child' is compatible with different φ-features since children can be both male or female. The gender of the prefix then varies with the φ-features of the referent.

(89) a. *raksà:'a*
         ra-ksa-'a
         MSGA-child-DIM
         'boy'   (Baker, 1996:245, K.)

      b. *kontiksa'okòn:'a*
         konti-ksa-'okon'a
         FZPLA-child-DIST.PL
         'girls'   (Baker, 1996:245, K.)

Due to the visibility of the nominal's φ-features to the agreement prefix, I suggest this prefix must be located higher than a PersP projection introducing the φ-features of the nominal. This places the agreement prefix higher in the nominal spine than nP.

   The nominalizer appears with some verbal roots occurring as unincorporated nouns, like *kahi-atónhsera* 'book, paper, letter', based of the verbal root *hiaton* 'write', which is suffixed with an overt nominalizer to form a nominal root.

(90) *kahiatónhsera*
      ka-hiaton-hser-a
      NA-write-NMLZ-NSF
      'book, paper, letter'   (McDonald, 2017)

Lastly, the noun suffix has the forms *-(e)'*, *-a'*, and *-on*. The noun suffix is lexically conditioned by certain roots, and as such some roots appear without a noun suffix (see 87 and 88 above, for example). The form of the noun suffix is also lexically specified (Bonvillain, 1973). For example, *o'wà:ron* 'meat' takes the *-on* form of the noun suffix, but *kákhwa'* 'food' appears with the *-a'* form.

(91) a. *o'wà:ron*
         o-'wahr-**on**
         NP-meat-NSF
         'meat'   (McDonald, 2017)

      b. *kákhwa'*
         ka-khw-**a'**
         NA-food-NSF
         'food'   (McDonald, 2017)

The noun suffix occurs *after* the nominalizer when it appears. This is clear in (90) where the noun suffix *-a'* appears after the overt nominalizer *-hser*. This suggests that the noun suffix appears in a projection outside of nP. This, along with the agreement suffixes requiring visibility of a PersP layer, is further evidence (in addition to that discussed in §3.2) that unincorporated nominals necessarily involve higher projections than nP.

   Given this data, I suggest the structure of unincorporated nominals to be in (92).

(92)
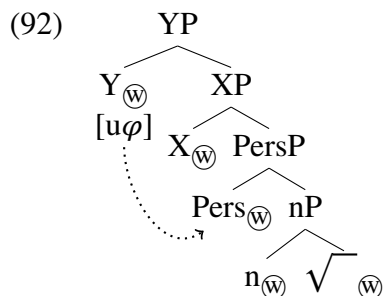
I remain agnostic as to the exact heads represented by X and Y. The important details are that the X head is exponed by the noun suffixes, occurring outside of the nP and hence outside the overt nominalizer, and that the Y head hosts a probe that searches its c-command domain for φ-features, generating an agreement prefix. The high position of Y allows the probe to find and Agree with the lower Pers head containing the φ-features of the nominal. This explains why the nominal agreement prefixes always reflect the gender and number of their referents. In the case of neuter nominals, the PersP layer does not exist and thus the probe generates default pronominal prefixes, the neuter agreement. The separation of the X and Y heads also accounts for the lack of correlation between the form of the noun suffix and which set of agreement prefix a nominal displays. Lastly, all heads in this domain undergo the same word-building mechanism as attested in the verbal domain. As in that case, they are linearized bottom up, resulting in the correct ordering of the root followed by the nominalizer, followed by the noun suffix. I leave the exact identity of X and Y for further research.

5.1.2 Motivating alienability via possessor raising

I now switch gears to discuss possessor raising in Kanien'kéha. I will motivate its structure here, before showing in the next section that the exact same structure correctly accounts for the excorporation facts. Kanien'kéha displays an "possessor raising" construction, in which the possessor of a verbal argument becomes marked as an argument of the verb rather than as an argument of the nominal possessum (see Deal, 2017 for an overview).[28] A typical possessor raising construction is in (93).

(93) *Terrance wahshakohnenhsáia'ke'*   *ne Katya.*
      Terrance wa'-hshako-hnenhs-a-ia'k-e'   ne Katya
      Terrance FACT-MSG>FI-shoulder-JR-hit-PUNC NE Katya
      'Terrance tapped Katya's shoulder.'   (McDonald, 2023)

Here, the possessum root *hnenhs* 'shoulder' has been incorporated into the verb *ia'k* 'hit, tap', stranding the possessor *Katya* external to verbal complex. Since the theme has incorporated, the verb is expected to reflect intransitive agreement as discussed in §3.3.1. However, the possessor *Katya* is instead marked as a bona fide verbal argument, indexed as the primary object of the verb via the third person masculine singular over third person feminine-indefinite transitive prefix *hshako-*. Note that, while this works for the root *hnenhs* 'shoulder', the exact same structure is ungrammatical for the root *'sere* 'car' in (94).

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[28]I use the term possessor raising purely descriptively; I remain agnostic as to whether the possessor truly undergoes raising in a syntactic sense.

(94) *Context: Ontkwiraté:ni is your neighbor. One day you look outside and notice his car is
      dirty, so you go over and wash it.*
      *Wahi'serehtóhare'   *ne Ontkwiraté:ni.*
      wa'-hi-'sere-ht-ohare-'   ne Ontkwirateni
      FACT-1SG>MSG-car-NMLZ-wash-PUNC NE Ontkwirateni
   Intended: 'I washed Ontkwiraté:ni's car.'   (McDonald, 2023)

The structure in (94) is the exact same as in (93). The theme *'sere* 'car' has been incorporated into
the verb *ohare* 'wash', stranding the intended possessor *Ontkwiraté:ni*. Additionally, the verbal
agreement indexes the possessor *Ontkwiraté:ni* as the primary object of the verb, using the first
person singular over third person masculine singular transitive prefix *hi-*. Yet despite the structural
isomorphism to (93), (94) is ungrammatical.

   I follow Baker (1999) in suggesting that possessor raising displays an alienability split in pos-
sessum nominals in Kanien'kéha: possessor raising is allowed with inalienable roots, like *hnenhs*
'shoulder', while disallowed with alienable roots like *'sere* 'car'. Crosslinguistically, it is very com-
mon that possessor raising is restricted to body parts (Deal, 2017), lending support to the argument
that this is a split in alienability, as the only inalienable nominals in Kanien'kéha are body parts.[29]
There are more differences between alienably- and inalienably-possessed roots to be discussed later,
but for now I turn to the structure of inalienability and how it gives rise to possessor raising.
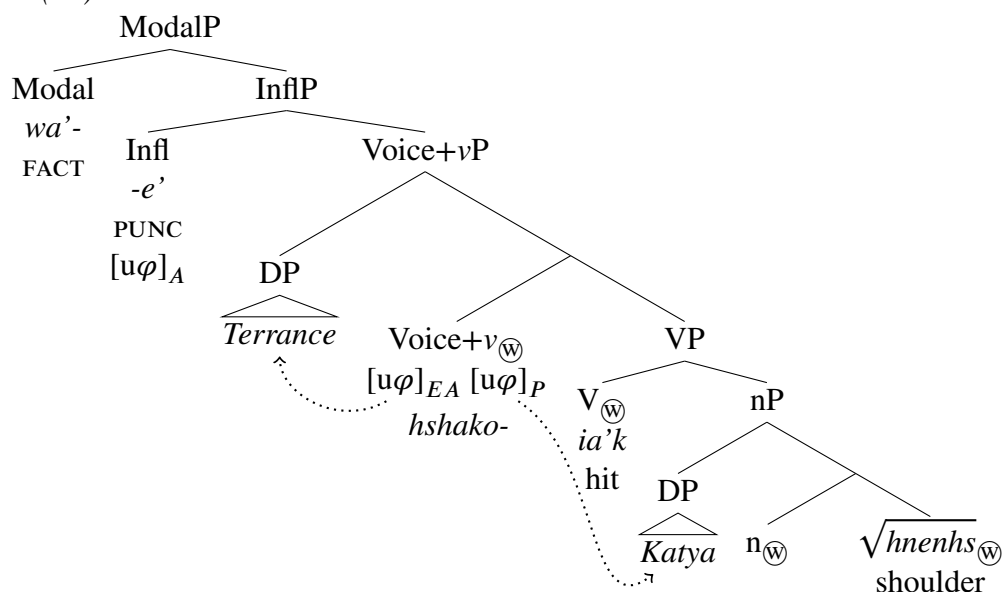
5.2   The structure of possessor raising

As discussed in the previous section, only inalienable noun roots, corresponding to the class of body
part roots, can be externally possessed in Kanien'kéha. I now show that the structure of possessor
raising in Kanien'kéha follows precisely from independently motivated proposals on inalienable
possession from typologically distinct languages. Previous work has proposed that in inalienable
possession, the possessor and possessum are introduced in the same constituent (Alexiadou, 2003).
This reflects the fact that inalienable possessums, by definition, require a possessor, and thus by
being introduced in the same constituent, the inalienable possessum is always endowed with its
required possessor. Following Alexiadou (2003) on Greek (Indo-European) and Tyler (2021) on
Choctaw (Muskogean), I propose that inalienable possession involves a nP, where the root of the
nP is the possessum, and the possessor is introduced in Spec,nP. This is schematized in the tree in
(95).

(95)   nP
              ⟋   ⟍
          ZP   ⟋ ⟍
      POSSESSOR   n   √POSSESSUM
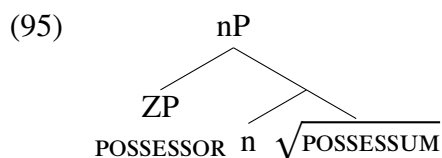
   The model of inalienability in (95), independently proposed for other languages, directly ac-
counts for possessor raising behavior in Kanien'kéha without appeal to movement or binding, as in
the tree below (96).

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[29]I (as well as the Iroquoianist literature) have not found other nominals that display the constellation of properties
associated with inalienability besides body parts. Kinship terms in Northern Iroquoian languages are not clearly nom-
inal, displaying multiple verbal properties, therefore they are not candidates for alienability. See Michelson, 2023 for
more details about the part of speech of kinship terms in Northern Iroquoian.

(96)   = *(93)*

```
                        ModalP
            ┌─────────────┴──────────────┐
         Modal                         InflP
         wa'-              ┌─────────────┴──────────────┐
         FACT            Infl                      Voice+vP
                         -e'            ┌────────────┴─────────────┐
                         PUNC          DP                        
                         [uφ]_A      ⟨Terrance⟩                   
                                      ┌───────┴────────┐          
                                   Voice+v_ⓦ            VP
                                   [uφ]_EA [uφ]_P   ┌─────┴──────┐
                                    hshako-        V_ⓦ          nP
                                                   ia'k    ┌──────┴──────┐
                                                   hit    DP            
                                                        ⟨Katya⟩  n_ⓦ   √hnenhs_ⓦ
                                                                        shoulder
```

Because inalienable possession structures are nPs, they are able to merge with V without issue; both the inalienable root and its possessor exist within the nP and so both enter the derivation through the merge of the nP with V. V then merges with a combined Voice+v, which, following the agreement system of Coon, 2023 in §3.3.1, hosts a patient $[u\varphi]_P$ probe and an external argument $[u\varphi]_{EA}$ probe. As described above, the patient $[u\varphi]_P$ probe searches its c-command domain. Importantly, while the possessor is a bigger constituent able to contain D-level material, the theme root itself has no PersP projection so it does not have any φ-features. Therefore, the $[u\varphi]_P$ probe looks into the nP in search of φ-features and finds the inalienable possessor. The $[u\varphi]_P$ probe then forms an Agree relation with the inalienable possessor and copies back its features. Since the $[u\varphi]_P$ probe was successful, the $[u\varphi]_{EA}$ probe may probe, having its features valued by the DP in Spec,Voice+vP as a by-product of Merge. The locality of the features of both the external argument and the inalienable possessor on Voice+v allow the portmanteau pronominal prefix *hshako-* to be generated. Importantly, since the $[u\varphi]_P$ probe copied back features from the inalienable possessor, the portmanteau indexes the inalienable possessor as the primary object of the verb.

Later in the derivation, all the heads in the VoiceP domain participate in morphological word-building, as shown by the subscript ⓦs. This word-building is obligatory, and linearizes the word beginning with the incorporated root (i.e., the lowest head) followed by consecutive heads. As in the earlier case of relative clausal modifiers to incorporated roots, this word-building mechanism forces the linearization of the possessum apart from its inalienable possessor, thus apparently "stranding" the possessor. This perfectly predicts the behavior displayed in possessor raising; the theme root has incorporated via word-building and the possessor is "stranded" but reflected as the primary object of the verb. This process immediately follows from the restriction of V's complements to nPs and the mechanism of word-building inside VoiceP as motivated previously when applied to independently motivated accounts of inalienable possession.

In the next subsection, I will show that the model for possessor raising schematized in (96) applies directly to the case of excorporation.

## 5.3   Stowing away nominals

I now present the main claim of this work: there is no derivational relationship between the incorporated and excorporated variants of Kanien'kéha themes. The incorporated variant is generated with a lexical root as the nP theme complement of V and appears incorporated via a morphological word-building mechanism, as I argued in §4.2.3. In contrast, excorporated themes are "stowed away" into the derivation as the inalienable possessors of a dummy incorporated root. In other words, excorporated variants of sentences are in fact possessor raising in disguise.

The derivation in (96) parallels the case of unincorporated themes in a number of ways. In the case of possessor raising, there is a theme root that via the word-building mechanism ends up incorporated, and in the process the root "strands" a nominal. This nominal ends up outside the verbal complex because it is in the specifier of a projection and therefore does not participate in the word-building mechanics of the VoiceP. Additionally, this verb-external nominal controls primary object agreement on the verb, rather than the incorporated root.

In the case of excorporated variants, verbs generate with a dummy theme nP complement that undergoes morphological word-building and thus winds up incorporated, as proposed in §4.3. Further, there is verb-external nominal (i.e., the unincorporated theme), and this nominal, not the dummy root, controls primary object agreement on the verb. The clear parallels allow us to account for excorporation facts. I suggest that unincorporated themes are base-generated in Spec,nP of the dummy incorporated root, as the inalienable possessors of the dummy root. I suggest the dummy roots semantically refer to the "substance" of the referent of the XP in its specifier, and therefore qualify as inalienable possessa. The detailed derivation of the excorporated variant in (2b), repeated here as (97a), is in (97b).

(97)   a.   *Wa'kehrhó:roke'*   *ne oháhsera'.*
           wa'-ke-hrh-orok-e'   ne o-hahser-a'
           FACT-1SGA-thing-cover-PUNC NE NP-light-NSF
           'I covered the/a lamp.'   (McDonald, 2023)

   b.
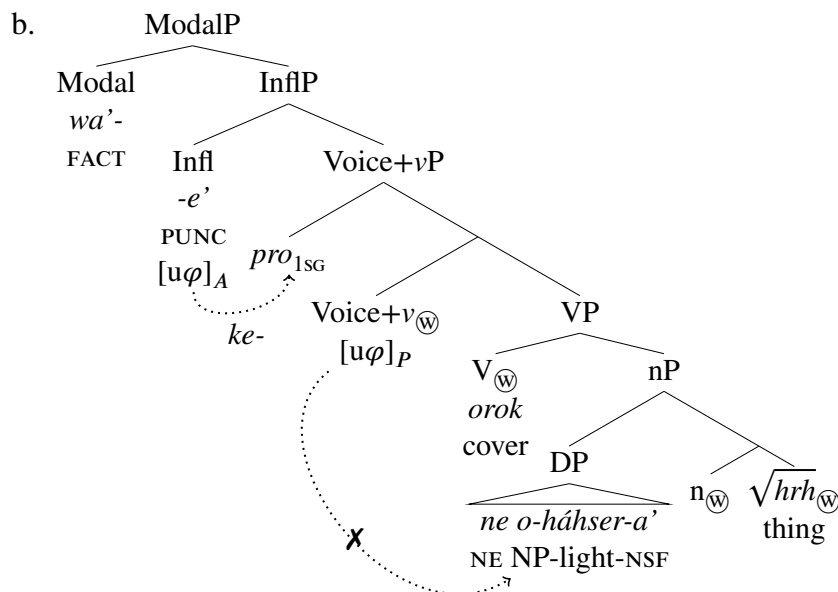
The excorporated theme derivation parallels the possessor raising derivation in (96). As I have argued in §5.1.1, unincorporated nominals contain more functional structure than nP, as evidenced by the presence of agreement prefixes, which reflect the features of a PersP layer of the nominal spine. I have also argued this fact based on availability of lexical suffixes like *-onwe* 'real, genuine', as well as the availability for number marking using the distributive plural suffixes *-'shon'a* and *-'okon'a*. Finally, the occurrence of the nominal suffix outside of overt nominalizers also suggests that unincorporated nominals contain more structure than nP. Since V may only merge with nP, unincorporated nominals are then barred from merging with V as themes. However, (di)transitive and unaccusative Vs require themes, therefore they merge with a dummy root nP. This allows the unincorporated nominal to "stow away" in the nP by generating as the inalienable possessor of the dummy root. Importantly, this nP is roughly semantically equivalent to having the inalienable possessor as a theme. Since the dummy root denotes the substance of the inalienable possessor, the excorporated nominal ends up with a theme-like interpretation. For the example in (97a), if one covers a lamp's substance, one is covering the lamp.

The nP containing the dummy root and the unincorporated nominal merges with V, and the derivation continues as usual. The patient probe $[u\varphi]_P$ on Voice+v searches its c-command domain; in the case of (97b), neither the bigger unincorporated nominal nor the dummy root has any φ-features and thus the $[u\varphi]_P$ probe fails to Agree, resulting in the $[u\varphi]_{EA}$ probe on Voice failing to probe. Instead, the $[u\varphi]_A$ probe on Infl probes and finds the external argument, generating an agent set pronominal prefix indexing this argument. Later in the derivation, the word-building mechanism applies to all heads within the VoiceP and thus the dummy root ends up incorporated via the linearization of the root first followed by consecutive heads to the right. Since the inalienable possessor is not a head, it does not undergo word-building with the heads of VoiceP and therefore ends up external to the verbal complex, excorporated as desired.

Such a derivation also predicts the relevant information-structural facts. As DeCaire et al. (2017) note, excorporation is typically only used for information structural reasons. They argue due to word order restrictions that Kanien'kéha has a dedicated focus position in the left periphery. I assume then that focused nominals arrive at their surface position via A'-movement. I argue that nPs do not have enough functional structure to host features typically taken as relevant for A'-movement, such as [FOC] or [WH] (Renard, 2023; see Coon, Baier, et al., 2021; Van Urk, 2015 for other accounts connecting A' features to presence of higher nominal structure). However, the unincorporated nominal in Spec,nP does have the requisite functional structure for such features and thus may undergo A'-movement for focus in addition to other information structural movement. The validity of this claim can be displayed by *wh*-questioning of themes. Note that Kanien'kéha has obligatory *wh*-movement (Baker, 1996; Bošković, 2008).

(98) a. *Oh   nahò:ten Sá:k wahahní:non'?*
         oh   nahohten Sak wa'-ha-hninon-'
         what.PRT what   Sak FACT-MsGA-buy-PUNC
         'What did Sá:k buy?'   (Baker, 1996:68, K.)

      b. **Sá:k wahahní:non'*   *oh   nahò:ten?*
         Sak wa'-ha-hninon-'   oh   nahohten
         Sak FACT-MsGA-buy-PUNC what.PRT what
         Intended: 'What did Sá:k buy?'   (Baker, 1996:69, K.)

If the unincorporated nominal, as the inalienable possessor, has the features available for A'-movement,

a dummy incorporated root should appear incorporated in the verb when a theme is questioned. This is because the derivation as in (97b) should operate as explained above, with the sole difference that the inalienable possessor in Spec,nP is a *wh*-word with a [WH] feature and thus undergoes A'-movement to a higher position.

On the other hand, suppose the nP has features available for A'-operations. This is similar to the excorporation analysis of Renard (2023), in which the noun generates internal to the verb and then A'-moves out of the verbal complex in order to receive an information structural interpretation. Such an analysis would predict that in theme *wh*-questions, no dummy incorporated root should appear. This is because the nP itself has A'-moved to a higher position, leaving a trace, and thus during the word-building mechanism, nothing spells out in the position evacuated by the theme root. Nonetheless, an account in which the nP may undergo A'-movement does not correctly account for the data, and as predicted by my account, a dummy incorporated root does in fact appear when a theme is *wh*-questioned.[30]

(99)   a.   *Oh*   *nahò:ten Katsi'tsiahtónhtha' wa'enóhare'?*
            oh   nahohten Katsi'tsiahtonhtha' wa'-ie-**n**-ohare-'
            what.PRT what   Katsi'tsiahtonhtha' FACT-FIA-thing-wash-PUNC
            'What did Katsi'tsiahtónhtha' wash?'

       b.   **Oh*   *nahò:ten Katsi'tsiahtónhtha' wa'akóhare'?*
            oh   nahohten Katsi'tsiahtonhtha' wa'-iak-ohare-'
            what.PRT what   Katsi'tsiahtonhtha' FACT-FIA-wash-PUNC
            Intended: 'What did Katsi'tsiahtónhtha' wash?'   (McDonald, 2023)

In the well-formed theme *wh*-question in (99a), the theme *wh*-word has been fronted and inside the verb the dummy root *n* appears with the verb *ohare* 'wash'. Note that when this dummy root is removed in (99b), the sentence becomes ungrammatical. Then as predicted by my account, the nP does not have the features for A'-movement required for information structural interpretations. However, the inalienable possessor *does* have such A'-features and therefore excorporated nominals may generate with information structural features and undergo A'-movement.

The higher structure occurring in the nominal spine of excorporated nominals directly derives an information structure flavor of readings associated with said nominals as noted by DeCaire et al. (2017). In the case of a focused theme, as in the case of *wh*-movement above, nPs do not have the structure with which to generate A'-features, such as [FOC]. Focus of "themes" then occurs as in (100).

(100) a.   *Kà:sere wahahní:non'.*
            ka-'sere wa'-ha-hninon-'
            NA-car   FACT-MSGA-buy-PUNC
            'He bought *a car*.'   (DeCaire et al., 2017, dialect ?)

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[30]The difference in forms between the third person feminine-indefinite prefix *ie-* in (99a) and *iak-* in (99b) is regular allomorphy; *ie-* appears before consonants, while *iak-* appears before *o*.

b.
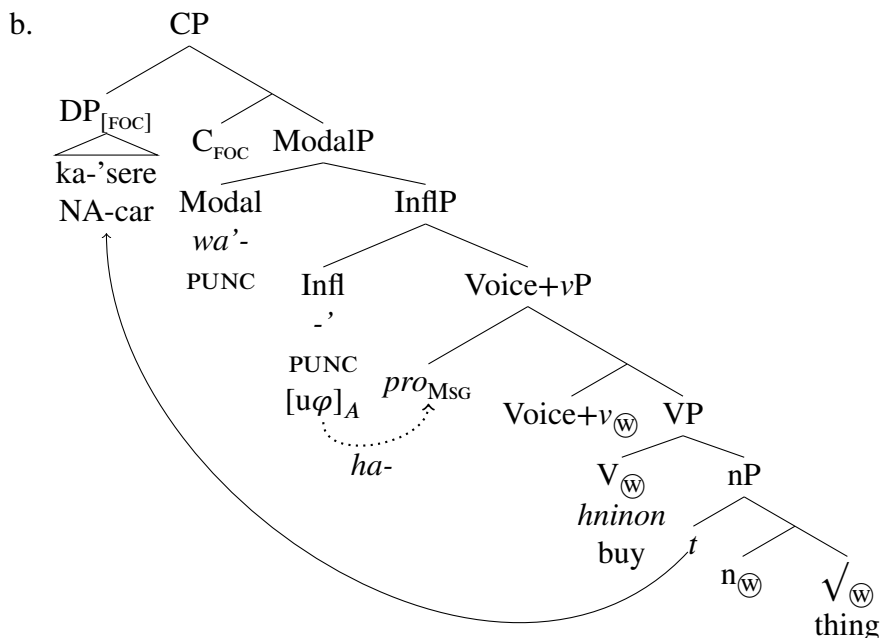
In order to generate with [FOC], the excorporated nominal *ka'sere* 'car' must appear with more structure than nP. Since this nominal is barred from merging with V, it stows away into the derivation by merging in Spec,nP, the inalienable possessor of a dummy root.[31] V merges with this nP containing both the dummy root and the focused constituent in Spec,nP. The stowed away nominal later moves to a high left-peripheral specifier in order to check [FOC], resulting in a focused interpretation. Throughout the derivation, the focused nominal never occurs as a head targeted by the word-building mechanism, and therefore appears external to the verbal stem. This correctly predicts that external nominals receive an information structurally significant reading.

   Note that other information structural interpretations are available for excoporated nominals, specifically those occuring with the determiner-like *ne*. These usually get an "anti-topic" reading, where they refer to back to entities already in the discourse (Chafe, 1976; Renard, 2023). If Henhawk and Whitman (2024) are on the right track, these nominals do not undergo movement to such a high specifier but undergo object shift to escape existential closure, resulting in a specific (and hence necessarily anaphoric) reading of the nominal. This type of A-movement would presumably also be available only to the larger structure of the stowed away nominal but not the incorporated root. Nominals generating with *ne* are larger than nP and thus stow away. These are the only nominals available for the A-movement suggested for Gayogo̱ho:nǫʔ *neʔ*-nominals; the incorporated nominal does not have enough structure for such a movement. This again derives correct information structure readings associated with excorporated nominals.

   The account outlined follows the intuitions of DeCaire et al. (2017) and Renard (2023); however, it does not run into the problems of extra nominal morphology on excorporated nominals as well as the appearance of dummy incorporated roots foreshadowed in §4.3. Here, the presence

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[31]In the case of (100a) this dummy root is null. However, with a different verbal root, such as *ohare* 'wash', the dummy root would be overtly reflected in the morphology.

of extra nominal morphology directly corresponds with the inability to merge directly with V—thus accounting for dummy incorporated roots—as well as with the requirement to undergo A- or A'-movement, which then directly derives the information structural readings of excorporated nominals; in other words, this account ties the extra nominal morphology to the presence of dummy incorporated roots and information structural readings, predicting the behavior of all of these phenomena in one fell swoop.

5.4 Extensions of the stowaway analysis

5.4.1 A brief return to *wh*-movement

In addition to themes being questioned alongside dummy roots, apparent themes may be questioned alongside a lexical incorporated root, as in (101). Here, a lexical root *ahi* 'fruit' has been incorporated, while the theme has been questioned with the *wh*-word *oh nahohten* 'what'. While Baker (1996) claims forms such as (101) are ungrammatical, Barrie (2015) notes that for Onondaga, such sentences are perfectly acceptable. As for the speakers I worked with, these sentences are slightly degraded but definitely attested by native speakers.[32]

(101)   *Context: My roommate and I bought an assorted box of fruit. When my roommate left this morning it was full. While he was away, I ate some fruit. When my roommate returns, he feels the box is less heavy, but he doesn't know what in the box I ate.*

    ?*Oh   nahò:ten wahsà:iake'?*
     oh   nahohten wa'-hs-ahi-a-k-e'
     what.PRT what   FACT-2SGA-fruit-JR-eat-PUNC
     'What (fruit) did you eat?'   (McDonald, 2023)

This supports my account in two ways. First, it provides further evidence that the extra phonological material in certain verbs like *ohare* 'wash', does in fact expone dummy incorporated roots. These data show that both lexical and dummy roots show.a symmetry with regards to syntactic tests in addition to their complementary distribution, suggesting that the dummy roots are indeed incorporated nominals as incorporated lexical roots are. Additionally, these data suggest that there cannot be a derivational relationship between incorporated and excorporated variants, as even with an overt lexical root incorporated inside the verb, the theme can be questioned. Clearly, this cannot be the lexical root, since *wh*-movement should leave a silent trace; thus there must be another low position where the *wh*-word can be generated that is not theme position allowing the creation of these questions. This is exactly as predicted by my account, where these *wh*-words generate as the inalienable possessors of the incorporated root.

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[32]Regardless, the point is that the inalienable possessor of a lexical root can also exhibit A'-movement, as 'what type of' questions targeting this location are completely grammatical:

(i) *Context: Same as (101).*
   Oh   niwahiò:ten   wahsà:iake'?
   oh   ni-w-ahi-o't-en   wa'-hs-ahi-a-k-e'
   what.PRT PART-NA-fruit-kind.of-STAT FACT-2SGA-fruit-JR-eat-PUNC
   'What kind of fruit did you eat?'

Lastly, the availability for the inalienable possessor of the incorporated root to undergo *wh*-movement allows an operator account of the internally-headed relatives discussed in §4.2.2. Recall that the theme heads of relative clauses in Kanien'kéha can appear as incorporated roots *inside* the relative clause as in (102), repeated from (72).

(102) [*Ra'therón:ni'*]   *wa'katkátho'.*
       r-**a'ther**-onni-'   wa'-k-atkatho-'
       MsGA-basket-make-PUNC FACT-1sGA-see-PUNC
       'I saw the basket he is making.'   (Baker, 1996:167, K.)

My account predicts that this should be the case. As seen above, the inalienable possessor of incorporated roots (whether they are lexical or dummy) is available for A'-movement. I then suggest that in the case of internally-headed relative clauses like (102), the relative clause operator begins in Spec,nP as the inalienable possessor of the incorporated root and undergoes A'-movement to Spec,CP, as is standard for operator-based analyses of relative clauses. This is shown in the tree (103).

(103)   = *(102) ra'theronni'*
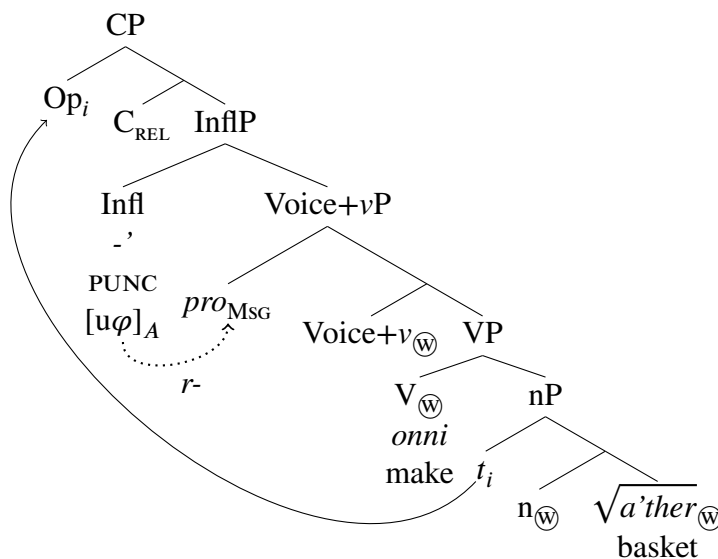
The incorporated root *a'ther* 'basket' is generated as the root of the complement nP of the verb root *onni* 'make', as is standard for incorporated roots. In this case, however, a null relative clause operator is generated in Spec,nP as the inalienable possessor of the incorporated root. This operator then moves to Spec,CP deriving a relative clause interpretation. However, since the stowed away operator has moved, the incorporated root stays in situ, undergoing word-building with the rest of the heads inside the VoiceP within the relative clause. This leaves the apparent "head" of the relative clause (*a'ther* 'basket') inside the relative clause itself, while still deriving the relative clause reading as required.

Here, I have argued that excorporated themes are not generated as themes at all. Instead they are "stowed away" into the derivation as the inalienable possessor of a true theme root. This inalienable possessor is available for A'-movement, which allows for the information structural interpretations

of excorporated themes noted in DeCaire et al. (2017), as well as predicts both the appearance of incorporated roots in theme *wh*-questions and theme internally-headed relative clauses.

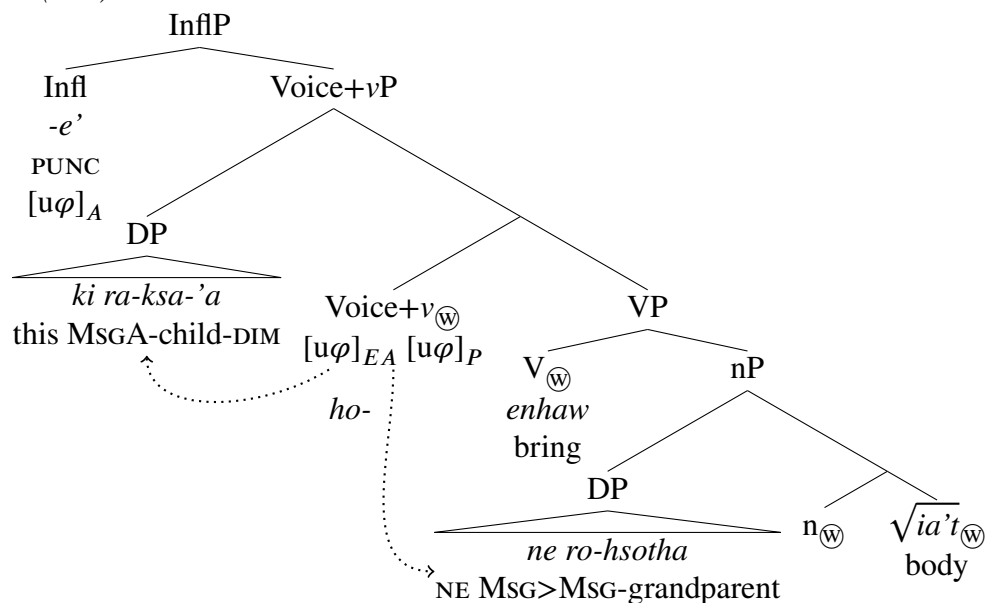### 5.4.2   The missing link: The case of highly animate themes

As I noted in §3.3.1, highly animate roots are often barred from incorporation. I chalked this up to the presence of a PersP contained in the nominal spine of highly animate nominals. This directly extends to nominals referring to humans; these nominals (or null *pros*) trigger verbal agreement, thus they must have φ-features, and thus a PersP (see Déchaine and Wiltschko, 2002).   In this case, expressions referring to human referents should be barred from merging with V. I propose that highly animate apparent themes, such as nominals and *pros* referring to humans, also are also stowed away into the derivation by occurring as the inalienable possessor of a dummy root.

If this proposal is correct, dummy incorporated nouns should appear alongside human "themes." Additionally, my account would predict that the dummy root should have the semantics of some sort of substance of the human referent and thus be inalienably possessed.

Indeed, there is evidence for both of these claims. In some verbs with human themes, an incorporated root *ia't* 'body' appears.

(104) *Ó:nen iá:ken' ki raksà:'a   iahoia'ténhawe'   ne*
       onen iaken' ki ra-ksa-'a   i-a'-ho-**ia't**-enhaw-e'   ne
       now   they.say this MsGA-child-DIM TRANS-FACT-MsG>MsG-body-bring-PUNC NE
       rohsótha.
       ro-hsotha
       MsG>MsG-grandparent
       'Now, they say, the boy brought his grandfather.'   (Jacobs, 1976c, K.)

This aligns with all of the properties listed above: *ia't* is an incorporated dummy (i.e., the sentence is not interpreted specifically as bringing the grandfather's body, but rather as bringing the grandfather), the body is clearly the "substance" of a human referent, and 'body' is by definition a body part noun and thus must be inalienably possessed. The case of animate themes is then a sort of bridge between possessor raising and excorporated variants and illuminates how the structure of possessor raising and excorporated variants are one and the same. As an example, take the derivation of (104) in (105).

(105)   = *(104) hoia'tenhawe'*

```
                        InflP
                 ┌───────┴───────┐
               Infl            Voice+vP
               -e'          ┌──────┴──────┐
               PUNC
               [uφ]_A
                          DP
                    ┌─────┴─────┐
                  ki ra-ksa-'a
                this MSGA-child-DIM
                            Voice+v_ⓦ              VP
                            [uφ]_EA [uφ]_P   ┌──────┴──────┐
                                ho-        V_ⓦ            nP
                                          enhaw      ┌─────┴─────┐
                                          bring
                                                  DP
                                            ┌─────┴─────┐
                                          ne ro-hsotha    n_ⓦ   √ia't_ⓦ
                                       NE MSG>MSG-grandparent        body
```

Due to the presence of functional material, the animate nominal *rohsotha* 'grandfather' cannot merge with V. Then as in derivations with excorporated themes, V must still merge with a nP, so the animate nominal is stowed away into the derivation as the inalienable possessor of a dummy root denoting the "substance" of the animate being stowed away. This ends up being *ia't* for human themes, clearly mirroring both possessor raising of body part roots, as well as the stowing away of excorporated nominals. The derivation follows exactly as in both of the above cases, with the probes on Voice+v copying back features from both the animate inalienable possessor and the external argument, thus spelling out the third person masculine singular over third person masculine singular prefix *ho-*. Finally, the word-building mechanism applies, incorporating the dummy *ia't* and "stranding" the animate inalienable possessor. In this way, the case of animate themes acts as a sort of missing link between possessor raising and the case of excorporated themes.

5.5   Summary

In this section, I have argued that there is no derivational relationship between incorporated and excorporated variants of a sentence, specifically proposing that excorporated "themes" are not themes at all, but are rather generated as the inalienable possessors of dummy roots. I have shown that the case of excorporated nominals directly mirrors the structure of possessor raising in Kanien'kéha. I have also shown that possessor raising is only available for inalienably-possessed roots. I argued that this follows from the independently-proposed structure of inalienable possession as nPs. The important take-away then is that the derivation of both possessor raising and the case of excorporated nominals follows immediately, only requiring the stipulation that V must merge with nP. This stipulation alongside the morphological word-building mechanism immediately predicts all the facts for both incorporated and excorporated variants, without appealing to a derivational relationship between the two. Not only does such an account cover these facts, but it also correctly predicts the pragmatic neutrality of incorporation (as discussed in §4.2.3) as well as the information structural interpretation of excorporated variants. It lastly correctly predicts facts about the seem-

ingly disparate cases of high animacy themes, theme *wh*-questions, and theme internally-headed relative clauses.

6 Possession and more consequences of stowing away themes

In the previous section, I sketched a proposal that excorporated nominals are generated as the inalienable possessors of dummy incorporated roots. I motivated this via parallels with possessor raising, available to inalienable theme possessums. In this section, I further discuss different structures of possession in Kanien'kéha. This is largely for the sake of a complete description of Kanien'kéha possession, but as I will show, my analysis has consequences for the architecture of possession—consequences that are borne out. I begin this section with the other half of the possessor raising data: that alienable possessa are barred from being externally possessed. I then discuss internal possession—that is, possession marked internal to the nominal domain—discussing first alienable internal possession. I show that alienable internal possession further cements the existence of an alienability split and makes some correct predictions with regards to the stowing away of excorporated material. I finish by discussing internal inalienable possession.

6.1 Restrictions on possessor raising

In the discussion of possessor raising in §5.1.2, I showed that while inalienable roots, like body parts, may be externally possessed, alienable roots may not be (see also Baker, 1999). This is shown in (94), repeated here as (106).

(106)   *Context: Ontkwiraté:ni is your neighbor. One day you look outside and notice his car is dirty, so you go over and wash it.*
        *Wahi'serehtóhare'   *ne Ontkwiraté:ni.*
         wa'-hi-'sere-ht-ohare-'   ne Ontkwirateni
         FACT-1SG>MSG-car-NMLZ-wash-PUNC NE Ontkwirateni
         Intended: 'I washed Ontkwiraté:ni's car.'   (McDonald, 2023)

The sentence in (106) exhibits all the hallmarks of possessor raising in Kanien'kéha: the possessum *'sere* 'car' is incorporated, stranding the possessor external to the verbal complex. Verbal agreement then marks the stranded possessor, rather than incorporated theme root, as the primary object of the verb. Even so, (106) is ungrammatical. Additionally, Baker (1999) notes that the sentence remains ungrammatical if the stranded possessor is *pro*-dropped, only being recoverable via verbal agreement.

I argued that the availability of possessor raising derived from an independently proposed structure for inalienable possession, in which the inalienable roots merge with a n that projects a specifier. This specifier hosts the inalienable possessor, thus both the possessor and the inalienably-possessed root are introduced within the same nP constituent. I propose that alienable roots, in contrast, may *not* merge with a n that projects a specifier. This is in line with Alexiadou (2003) and Tyler (2021), who suggest that while inalienable possession involves an integrated structural relationship between the possessor and possessum, alienable possession does not. The sentence in (106) immediately follows, as shown in (107).

(107)   = *(94)*
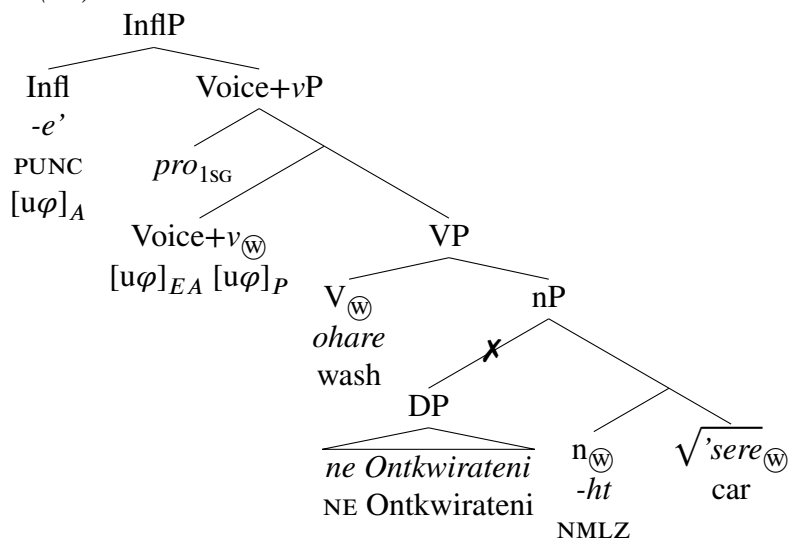
The theme root *'sere* 'car' is incoporated in (106), meaning that it must be generated as the nP complement of V, as follows from the word-building operation. However, *'sere* 'car' is alienable, and therefore the n it merges with does not project a specifier, as the x-mark shows on the tree. Therefore, unlike with inalienably-possessed roots, the nP complement of V in (106) has no position in which to introduce the possessor *Ontkwirateni*. Additionally, the verb displays no valence-increasing morphology, so there are also no higher specifiers in which this possessor may be introduced. Then the ungrammaticality of (106), when occurring with an overt possessor, results from the addition of a nominal when there is no position in which it may be introduced.

Ungrammaticality also obtains without an overt possessor. This can be explained in two ways. First, if the possessor is truly a *pro*, it suffers from the same issues as the overt possessor in having no position to be generated in. Second, the ungrammaticality can also be accounted for if there is no *pro* at all. In this case, the verbal agreement shows transitive agreement involving a third person masculine singular primary object. Following Coon's (2023) agreement proposal, this means that the patient probe $[u\varphi]_P$ on *v* must find masculine singular φ-features in its c-command domain. However, in the case of the sentence in (106), since there is no valence-increasing morphology on the verb and the n combining with the alienable root *'sere* 'car' does not project a specifier, no *pro* possessor or applied argument is introduced. In this case, as the $[u\varphi]_P$ probe searches its c-command domain, it will find no φ-features at all, given that the only nominal in this domain is the neuter theme root (i.e., a root without φ-features). This results in failure to Agree, leaving agreement morphology to be generated by the $[u\varphi]_A$ agent probe on Infl. The $[u\varphi]_A$ probe however only generates agent-set intransitive agreement, and therefore there is no possible way for the derivation to result in transitive agreement marking two arguments. Thus the marking of the verb with the transitive agreement prefix *hi-* results in the ungrammaticality observed when no overt possessor appears.

Despite the ban on possessor raising derived here, there are cases of apparent possessor raising for alienably-possessed roots. An example is in (108).

(108)   *Context: Ontkwiraté:ni is your neighbor. One day you look outside and notice his car is*
   dirty, so you go over and wash it.
   Wahi'serehtóhare'se'   *ne Ontkwiraté:ni.*
   wa'-hi-'sere-ht-ohare-**'s**-e'   ne Ontkwirateni
   FACT-1SG>MSG-car-NMLZ-wash-BEN-PUNC NE Ontkwirateni
   'I washed Ontkwiraté:ni's car.'   (McDonald, 2023)

The same facts as found in possessor raising are present here. The theme possessum *'sere* 'car' is incorporated into the verb, stranding the possessor *Ontkwirateni*. The possessor is then marked as the primary object of the verb via the agreement prefix *hi-*. However, note that (108) is a minimal pair with (106); in (108), the addition of the benefactive suffix *-'s* has resulted in grammaticality. I propose, following Michelson (1991) for Oneida, that sentences like (108) do not represent true possessor raising. Instead, possession arises as an implicature and the "possessor" is rather an applied (affectee) argument.

  First, in (108) only the addition of overt argument-adding morphology allows the apparent symmetry between possessor raising and examples like (108). Without it, the sentence is ungrammatical. This suggests that the primary object *Ontkwirateni* is instead introduced as an applied argument, rather than as the possessor of the incorporated root. Additionally, certain verbs do not require any argument-adding morphology to display the possessor raising facts with alienable roots. With the root *nenhskw* 'steal' in (109), the theme possessum *ris* 'sock' is incorporated and the primary object indexed by verbal agreement is a first person singular *pro*.

(109)   *Context: I only had one pair of socks left and as I'm getting ready, I can't find them any-*
   where. I go out to the kitchen to find my brother is wearing my socks.
   Wahakeriseranénhsko'   *ne ri'kèn:'a.*
   wa'-hake-ris-er-a-nenhskw-'   ne ri-'ken-'a
   FACT-MSG>1SG-sock-NMLZ-JR-steal-PUNC NE 1SG>MSG-younger.sibling-DIM
   'My little brother stole my socks.'   (McDonald, 2023)

However, as Michelson (1991) argues, verbs such as *nenhskw* 'steal' are special cases, in that they are underived three-place predicates. This is shown in (110).

(110)   *Context: I'm walking down the street with a bag of my brother's socks. A man comes up to*
   me and pulls out a knife and says "Give me the socks!"
   Wahakeriseranénhsko'.
   wa'-hake-ris-er-a-nenhskw-'
   FACT-MSG>1SG-sock-NMLZ-JR-steal-PUNC
   'He stole the socks from me.'   (McDonald, 2023)

The verb form in (110) is the same as that in (109). However, the context in (110) makes it clear that the primary object marked via verbal agreement, a first person singular argument, is not in fact the possessor of the socks, but rather the source argument of the sock-stealing. Michelson (1991) convincingly shows that only verbs that serve as underived three-place predicates, such as *nenhskw* 'steal' and *hninon* 'buy', may "externally possess" alienable roots without the addition of overt applicative morphology. Then the refined generalization is that alienably-possessed roots may only show possessor raising-type behavior when there is an applied argument position, whether this

position is introduced as part of the verb (in the case of underived three-place predicates) or whether it is introduced via overt applicativizing morphology. This suggests that the apparent "possessors" in cases such as (108) and (109) are instead applied arguments.

Sentences with seeming "possessor raising" of alienable roots are additionally ambiguous between a true possessive reading and an applied argument reading. This was seen with the pair of (109) and (110) above, but it also applies to verbs with overt applicativizing morphology as in (111).

(111)   a.   *Applied argument reading*
            Context: Ontkwiraté:ni and I work at a car wash. Wíshe hired Ontkwiraté:ni to wash
            his car, but he's sick, so I washed Wíshe's car instead.
            Wahi'serehtóhare'se'   *ne Ontkwiraté:ni.*
            wa'-hi-'sere-ht-ohare-'s-e'   ne Ontkwirateni
            FACT-1SG>MSG-car-NMLZ-wash-BEN-PUNC NE Ontkwirateni
            'I washed the car for Ontkwiraté:ni.'

        b.   *Possessor reading*
            Context: I work at a car wash. Wíshe asked me specifically to wash his car, so I did.
            Wahi'serehtóhare'se'   *ne Wíshe.*
            wa'-hi-'sere-ht-ohare-'s-e'   ne Wishe
            FACT-1SG>MSG-car-NMLZ-wash-BEN-PUNC NE Wishe
            'I washed the car for Wíshe./I washed Wíshe's car.'   (McDonald, 2023)

In (111a), the context provides the background that the car being washed belongs to Wíshe and not to Ontkwiraté:ni. Instead, Ontkwiraté:ni is the benefactor of my washing, since I am doing him a favor. In this case, the agreement prefix *hi-* indexes the applied argument *Ontkwirateni* as the primary object of the verb. The same verb form is used in (111b). Here, the context marks the car as Wíshe's, and thus he serves as a possessor argument. However, the primary object marked via the agreement prefix *hi-* is *Wishe*. Then this case mirrors possessor raising in which the possessor is marked via verbal agreement and the theme possessum is incorporated. The important point is that the verb form in both the possessor reading case and the applied argument reading case is the exact same, meaning this verbal form is ambiguous between whether the primary object of the verb is a possessor or an applied argument.

Additionally, as Michelson (1991) argues, the possession reading of seeming "possessor raising" of alienable roots is a defeasible implicature. As in (112), the implicature of possession can be directly canceled.

(112)   *Wahakhwistanénhsko'*   *nek tsi iah í: tewaká:wen.*
        wa'-hak-hwist-a-nenhskw-'   nek tsi iah i'i   te-wak-awen
        FACT-MSG>1SG-money-JR-steal but   NEG 1PRO NEG-1SGP-belonging.to[STAT]
        'He stole the money from me but it wasn't mine.'
        Speaker comment: "Like if I'm carrying Terrance's money and someone steals it off me."
   (McDonald, 2023)

The first verb in (112) follows all the facts previously established for possessor raising, with the theme root *hwist* 'money' incorporated into the verb. Additionally, as seen in (109), this same verb form (with the exception of the incorporated root being *ris* 'sock' instead) allows the first person

singular primary object to receive a reading as the possessor of the incorporated root. However, this reading can be expressly canceled in (112) by negating the possession reading. The resulting sentence is a perfectly felicitous utterance. The sentence in (113) shows the same ability to cancel a possession reading for a verb requiring the benefactive to display supposed "possessor raising" of alienable roots.

(113)   *Wahi'serehtóhare'se'*   *nek tsi iah raónha tehò:sere.*
        wa'-hi-'sere-ht-ohare-'s-e'   nek tsi iah raonha te-ho-'sere
        FACT-1SG>MSG-car-NMLZ-wash-BEN-PUNC but   NEG MSG.PRO NEG-MSGP-car
        'I washed the car for him but it wasn't his.'   (McDonald, 2023)

All of these facts taken together point to an analysis where true possessor raising is barred from alienably-possessed roots, as discussed above, and the apparent "possessor raising" exemplified by (108) is instead an implicature, where the "possessor" is actually an applied argument. Then the apparent "possessor raising" of alienably-possessed roots can be accounted for as in (114).

(114)   = *(108)*
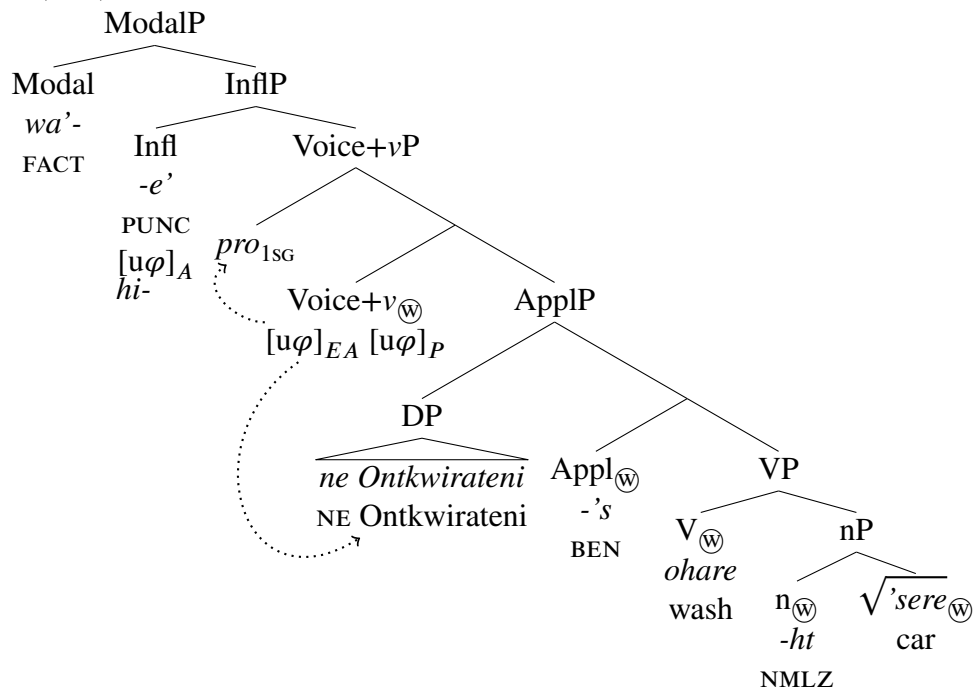
In this case, the alienable theme root *'sere* 'car' does not combine with a n projecting a specifier. However, in contrast to true possessor raising cases like (107), where the lack of such a Spec,nP position results in the inability to introduce a non-core argument nominal, the apparent "possessor raising" in (108) has an Appl projection, signaled by the overt benefactive suffix -*'s*. This introduces the putative "external possessor" *Ontkwirateni* in its specifier. The generation of the "possessor" in Spec,ApplP correctly predicts that this "possessor" is interpreted as a beneficiary applied argument rather than strictly as a possessor. The implicature of possession then arises out of the real world knowledge that in the majority of situations where person X washes a car for person Y, the car belongs to person Y. Incorporation happens via the morphological word-building mechanism, resulting in the linearization of the alienable theme root internal to the verb complex. The agreement facts follow: the $[u\varphi]_P$ probe searches its c-command domain and forms an Agree relation

with the applied argument, triggering the activation of the $[u\varphi]_{EA}$ probe. This probe is valued by the external argument *pro* in Spec,Voice+*v*P, generating the portmanteau pronominal prefix *hi-*. A similar story accounts for the apparent "possessor raising" for underived three-place predicates like *nenhskw* 'steal', except in this case, the applied argument-as-"possessor" is generated lower.[33]

In sum, the ban on possessor raising for alienably-possessed themes follows from their inability to combine with a n that projects a specifier. Nonetheless, alienably-possessed themes appear to allow possessor raising sometimes. However, I have shown that this only arises when a non-core argument position is generated via applicative morphology or in underived three-place predicates, and thus the putative possessor in these cases is not a possessor but instead an applied argument. In these cases, possession is only an implicature based on real world knowledge. Given that the only licit "possession" seen so far for alienably-possessed roots is merely a possession implicature, I now turn to the strategy for asserting possession for alienable roots.

6.2   Alienable internal possession

With a more detailed discussion of possessor raising completed, I begin an analysis of the last major topic of this work: internal possession. Whereas possessor raising involves marking of the possessor as an argument of a verb, hence external to the nominal domain, internal possession refers to possession in which the possessor is marked DP-internally. I lead with alienable internal possession and finish with inalienable possessor raising in the next subsection (§6.3).

As is typical of Kanien'kéha more generally, internal possession is realized as head-marking, with the features of the possessor appearing on the possessum. One strategy of internal possession involves prefixing the possessum with a set of possessor prefixes, replacing the typical agreement prefix occuring on unincorporated nominals. In (115) below, the possessum root *nonhs* 'house' occurs as an unincorporated nominal with the possessor prefix *ako-* indexing the φ-features (third person feminine-indefinite) of the possessor DP *Sally*.[34]

(115)   *Onekwénhtare wa'ekontsheráhro'*   *ne Sally akonónhsa'.*
        onekwenhtare wa'-ie-kontsherahrho-' ne Sally **ako**-nonhs-a'
        red   FACT-FIA-paint-PUNC   NE Sally FIP-house-NSF
        'Sally didn't paint her house red.'   (McDonald, 2023)

Additionally, the possessor can be *pro*-dropped as in (116). As in (115) above, the nominal root *hsenn* 'name' is marked with the first person singular possessor prefix *ak-*, indexing all of the φ-features of the possessor, despite no overt first person singular pronoun appearing. As is typical in languages with robust agreement paradigms, possessor marking on the possessum does not require an overt possessor to appear (Baker, 2006).

(116)   *Wári*   *akhsén:na'.*
        Wari *pro*₁SG ak-hsenn-a'
        Wari   1SGP-name-NSF
        'Wári is my name.'   (McDonald, 2023)

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[33]Nothing hinges on the precise location where this lower applied argument is introduced, as long as it is lower than a high Appl projection. For example, it could be in a Spec,VP position or in the specifier of a low Appl head below the verbal projection (Pylkkänen, 2008), especially given that these verbs always imply change-of-possession (Michelson, 1991).

[34]Thank you to Katya Morgunova for the examples (115), (135), (**??**), and (142).

Note that I gloss the possessor prefixes as patient-set prefixes. This is not an accident; the possessor prefixes are remarkably similar to the patient-set prefixes (Karin Michelson, p.c.), the former being derivable from the latter via only two phonological rules. First, patient-set prefixes beginning with glides lose their glides. However, this holds more generally for all agreement prefixes on nouns, as discussed in §5.1.1. The only rule specific to deriving the possessor prefixes from the patient-set prefixes is that if the first vowel appearing in the patient-set prefix for a certain set of φ-features is /o/, it becomes /ao/ in the corresponding possessor prefix. These two rules are exemplified by the table below (117) comparing the forms of the patient-set morphemes and the possessor prefixes for singular nominals before a following consonant (the "C-stem" forms). Due to the close similarity between these two prefix sets, I gloss them both as patient-set prefixes.[35]

(117)   *C-stem allomorphs of the patient-set and possessor prefixes for singular nominals*

person and gender	patient-set prefix	possessor prefix	
first person	*wake-*	*ake-*	loss of glide
second person	*sa-*	*sa-*	
third person M	*ro-*	*rao-*	/o/ → /ao/
third person FI	*iako-*	*ako-*	loss of glide
third person FZ/N	*io-*	*ao-*	loss of glide, /o/ → /ao/

The possessor prefixes also provide another diagnostic for an alienability split in nominal roots. Roots that may be externally possessed—those which I argued are inalienable—may take possessor prefixes to mark possession. However, as in (118), this always results in a *separable* (i.e., alienable) reading of the root. For example, the root *kahr* 'eye' receives the reading 'glasses', that is, separable eyes, when possessed using a possessive prefix.

(118)   *akkà:ra*
ak-kahr-a
1sgP-eye-nsf
'my glasses'
Not okay as: 'my eyes'   (McDonald, 2023)

In order to get an inseparable reading of these roots a different form of possession must be used. (See §6.3.) On the other hand, this is the only grammatical way to possess alienable possessum roots. As shown in (106), possessor raising is not allowed for alienable roots and as will be seen in §6.3, neither is the strategy for internal possession of inalienable roots. This further cements the split between alienable and inalienable roots. Given the separable readings associated with possessing inalienable roots by way of possessor prefixes, I take the possessor prefixes to be a form of alienable possession.

In addition to internal possession being the most general form of possession for alienable roots, it is the only way to truly ensure a possessive relationship for alienable roots. In direct contrast to

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[35]This is also informed by the fact that, as will be shown in §6.3, possessors for inalienably-possessed nominals are marked via agent-set prefixes lacking any changes in form from those used as agent-set prefixes on verbs. Additionally, when alienably-possessed roots occur as the themes of stative-only verbs, the verb displays patient-set agreement, while when inalienably-possessed roots occur as the themes of stative-only verbs, the verb instead reflects agent-set agreement. Clearly, there is some close tie between the set of agreement markers and alienability status, and therefore I argue that the possessor set of prefixes are a variant of the patient-set. Nevertheless, nothing in the following discussion hinges on this claim; in the worst case scenario for my analysis, the difference between the patient-set morphemes and the possessor prefixes is due to the spell out of the same features on different heads, or perhaps contextual allomorphy.

the apparent "possessor raising" in (111), possession of alienable roots via possessor prefixes is *not* ambiguous between possessor and applied argument readings. In both of the sentences in the pair in (119), the alienable theme root *'sere* 'car' appears as an unincorporated nominal possessed by third person masculine singular DPs, marked by the patient prefix *rao-*.

(119)   a.   ✓ *Possession reading*
             Context: I work at a car wash. Wíshe asked me specifically to wash his car, so I did.
             Wa'kenóhare'   ne *Wíshe raò:sere'.*
             wa'-ke-n-ohare-'   ne Wishe **rao**-'sere-'
             FACT-1SGA-thing-wash-PUNC NE Wishe MSGP-car-NSF
             'I washed Wíshe's car.'

        b.   ✗ *Applied argument reading*
             Context: Ontkwiraté:ni and I work at a car wash. Wíshe hired Ontkwiraté:ni to wash his car, but he's sick, so I washed Wíshe's car instead.
             #Wa'kenóhare'   ne *Ontkwiraté:ni raò:sere'.*
             wa'-ke-n-ohare-'   ne Ontkwirateni **rao**-'sere-'
             FACT-1SGA-thing-wash-PUNC NE Ontkwirateni MSGP-car-NSF
             Intended: 'I washed the car for Ontkwiraté:ni.'
             Okay as: 'I washed Ontkwiraté:ni's car.'   (McDonald, 2023)

In the first sentence (119a), the DP marked by the patient prefix is *Wishe*. Additionally, the context describes that the car I washed belongs to Wíshe. The sentence in (119a) is a completely felicitous way to describe the context. However, in (119b), the context forces an interpretation where *Ontkwirateni*, the DP marked by the patient prefix, is not the possessor of the car, but rather the applied argument. In this case, this sentence is not felicitous. This shows that internal possession of alienable roots via patient-set prefixes *entails* a possession relationship, as opposed to the implicature in the cases of apparent "possessor raising" above.

I propose, following Alexiadou (2003), Myler (2016), and Tyler (2021), that in contrast to inalienable possessors, which are generated extremely close to the possessum root, alienable possessors are generated in the specifier of a higher functional Poss projection. I further argue that the patient-set possessor prefixes are generated as a result of unvalued φ-features on the Poss head. These features are valued by the φ-features of the possessor in Spec,PossP as a by-product of Merge; this is the same method of feature valuation characteristic of the external argument $[u\varphi]_{EA}$ on Voice proposed by Coon (2023). This nicely captures the symmetry between verbal external arguments and possessors, which have been argued to be the "subjects" of the nominal domain (Baker, 1996). The structure of alienable possession is then as in (120).

(120)
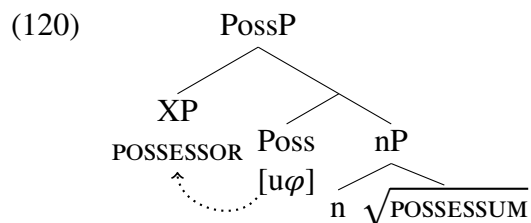
The projection of a higher Poss head in which to introduce alienable possessors also follows from general proposals cited above that alienable possession is less immediate than inalienable possession, and accounts for the fact that, whereas inalienable nominals immediately imply a possessor,

alienable nominals can appear unproblematically without a possessor in the discourse. This suggests that the possessor for alienable possessums is not tied to existence of the nominal in the way inalienable possessors are, and thus it follows that another projection would be required to introduce a possession relation and a possessor for alienable roots.

There is an additional arguments that the structure of alienable possession requires a higher projection in which to introduce a possessor. Roots with possessor prefixes are not able to incorporate. This is seen in (121a). The theme root *'sere* 'car' appears with the possessor prefix *rao-* indexing its third person masculine singular possessor. This complex is then incorporated into the verb. Nevertheless this leads to ungrammaticality; the grammatical variant requires the possessed theme to appear as an unincorporated nominal, as in (121b).

(121)   a.   *Wa'kerao'serehtóhare'.*
             wa'-ke-**rao**-'sere-ht-ohare-'
             FACT-1SGA-MsGP-car-NMLZ-wash-PUNC
             Intended: 'I washed his car.'

        b.   *Context: Ontkwiraté:ni is your neighbor. One day you look outside and notice his car is dirty, so you go over and wash it.*
             Wa'kenóhare'   *ne Ontkwiraté:ni raò:sere'.*
             wa'-ke-n-ohare-'   ne Ontkwirateni rao-'sere-'
             FACT-1SGA-thing-wash-PUNC NE Ontkwirateni MsGP-car-NSF
             'I washed Ontkwiraté:ni's car.'   (McDonald, 2023)

Building on the arguments I made in §3, this suggests that possessor prefixes involve architecture that is not of the category nP. If roots with possessor prefixes were nPs, incorporation of this complex into the verb should be grammatical. The ungrammaticality of examples like (121a) are then evidence that roots with possessor prefixes are not nPs. In the framework I am working within, the first step in the derivation is the categorization of a root, and I thus suggest that roots with possessor prefixes being of a different category than nP must mean that they carry the category features of a projection *higher* than nP.

Indeed, in order for roots to appear grammatically with possessor prefixes, they must occur as unincorporated nominals. Crucially, this includes the presence of a noun suffix. In (122), the root *nawir* 'tooth' appears with the feminine-indefinite possessor prefix *ako-* marking its possessor *kheionhwaten'a* 'my niece'. Importantly, the possessed theme appears with the noun suffix *-a'*.[36]

(122)   *Kheionhwatèn:'a wa'khniotá:ko'*   *ne akonawí:ra.*
        khe-ionhwaten-'a wa'-k-hni-ot-a-ko-'   ne ako-nawir-**a**
        1SG>FI-niece-DIM FACT-1SGA-thing-stand-JR-REV-PUNC NE FIP-tooth-NSF
   'I pulled my niece's tooth out.'   (McDonald, 2023)

As I discussed in §5.1.1 and showed in (90), when unincorporated nominals contain an overt nominalizer, the noun suffix appears outside the nominalizer, suggesting it expones material higher than nP. In this case, the requirement of possessor prefixes to appear as unincorporated nominals requiring a noun suffix points to an analysis in which the possessor prefixes involve projections higher than nP. Given these two language internal arguments for alienable possession being introduced by

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[36]Note that the root *nawir* 'tooth', although usually inalienable, acts as alienable in this case because the tooth has been separated from the body.

a higher projection than nP, as well as the general idea that alienable possession is less intrinsic than inalienable possession, the structure in (120) involving a larger PossP that introduces the possessor in its specifier and generates the possessor prefixes correctly accounts for the Kanien'kéha-specific generalizations of alienable possession while also tying alienable possession in Kanien'kéha to alienable possession behavior in more studied languages.

An important side effect of this structure is its consequences for the stowing away of themes. Under the structure for alienable possession I proposed above, alienable possession structures are not of the right category to merge with V. This prediction is correct insofar as it implies that when alienable possession structures are interpreted as themes, they may not incorporate and must appear unincorporated; this is exactly the behavior shown in (121). Under the stowing away analysis, this means that alienably-possessed "themes" must be stowed away into the derivation. More explicitly, they should be required to occur as the inalienable possessors of a dummy root. Keen readers will have seen that this prediction is in fact borne out. Both *ohare* 'wash' and *ot* 'stand' are verbs with overt morphological exponents of dummy roots (*n* and *hni*, respectively). As in (121b) and (122), when alienably-possessed themes occur with these verb roots, the incorporated dummy roots additionally appear, a clear point in favor of the stowing away analysis I have argued for in this work. A more detailed derivation of (122) is in the tree (123).

(123)   = *(122)*
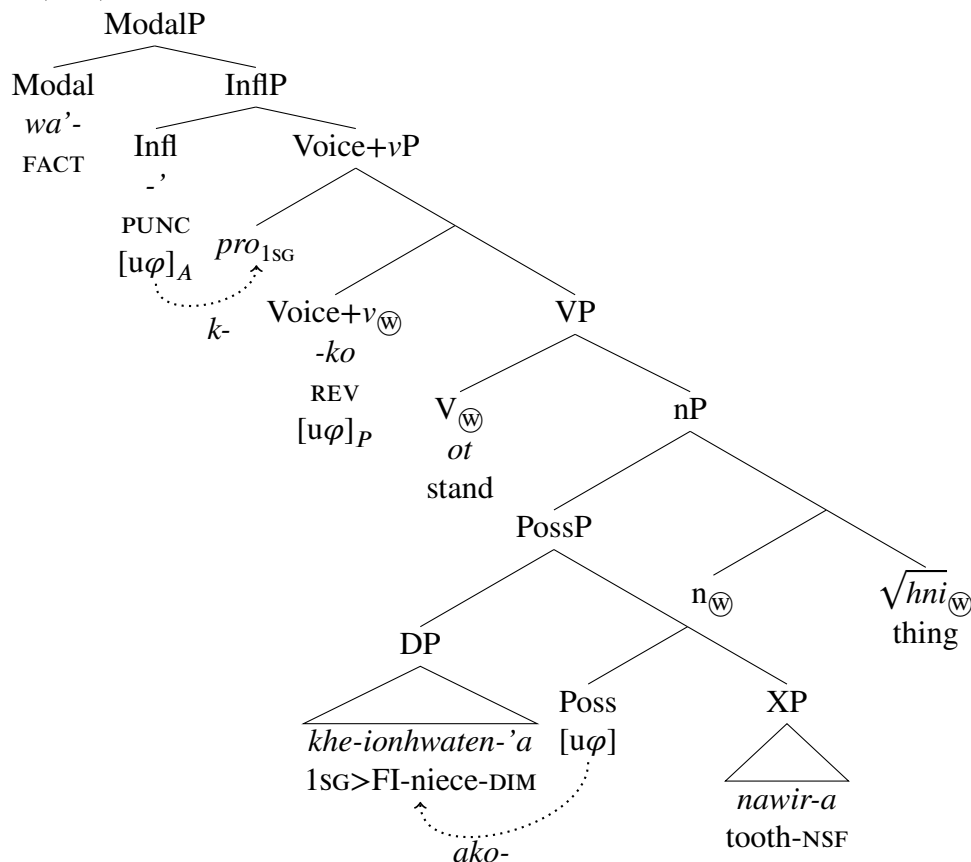
As described above, the PossP is not of the right category to merge with V. The PossP "theme" is then stowed away as the inalienable possessor of a dummy root in the specifier of the n that nominalizes the dummy root. Once the morphological word-building mechanism applies to the

heads inside of the VoiceP, the dummy root, its n, the verb, and the derivational material linearize in that order as an m-word, stranding the alienably-possessed "theme" outside of the verbal complex, as required. Internal to the PossP, the Poss head's unvalued features are satisfied via Merge of the DP possessor *kheionhwaten'a* 'my niece' in its specifier. This has two main results. For one it generates the possessor prefix *ako-*. Second, due to this relationship, the DP possessor is no longer visible to future Agree operations by either the Activity Condition (Chomsky, 2000, 2001) or some analogous mechanism stating that phrases that have been Agreed with or cliticized are not available to be subsequently Agreed with (Béjar and Rezac, 2003; Coon and Keine, 2021; Preminger, 2009). As the derivation continues, the $[u\varphi]_P$ probe on *v* searches its c-command domain. The only non-neuter nominal in *v*'s c-command domain is the possessor DP *kheionhwaten'a* 'my niece'. However, since this has been rendered invisible for further Agree operations, the $[u\varphi]_P$ probe forms no Agree relationship, preventing the $[u\varphi]_{EA}$ probe on Voice from probing. The $[u\varphi]_A$ probe on Infl then probes and Agrees with the external argument introduced in Spec,Voice+*v*P, generating an agent-set intransitive pronominal prefix. This derivation correctly derives the agreement, word-building, and stranding facts required in the sentence (122).[37]

It is important to note that an Activity Condition-equivalent is required to correctly derive the agreement facts. With alienably-possessed nominals, verbal agreement obligatorily reflects the possessum rather than the possessor. As can be seen in the well-formed (119a), repeated here as (124a), verbal agreement is intransitive since the possessum is neuter and therefore does not trigger agreement. However, as in (124b), agreement with the possessor, shown by the transitive prefix *hi-* is ill-formed, except for a specific context where the car is somehow animate in some way.[38]

(124)   a.   *Context: I work at a car wash. Wíshe asked me specifically to wash his car, so I did.*
             Wa'kenóhare'   *ne Wíshe raò:sere'.*
             wa'-**ke**-n-ohare-'   ne Wishe **rao**-'sere-'
             FACT-1SGA-thing-wash-PUNC NE Wishe MSGP-car-NSF
             'I washed Wíshe's car.'

        b.   #*Wahinóhare'*   *ne raò:sere'.*
             wa'-**hi**-n-ohare-'   ne rao-'sere-'
             FACT-1SG>MSG-thing-wash-PUNC NE MSGP-car-NSF
             Intended: 'I washed his car.'
             Speaker comment: "Only if he's a Transformer..."   (McDonald, 2023)

In the case where a principle similar to the Activity Condition operates, the Agree relationship or cliticization created between Poss and the possessor in Spec,PossP renders the possessor invisible to further cliticization or Agree relationships. This prevents higher verbal probes from finding the φ-features associated with the possessor and thus generating a transitive prefix based on these features. Without this important step, the model overgenerates, predicting the ungrammatical agreement in (124b).

Another potential argument in favor of the stowing away analysis involves possession's inter-action with A'-movement. As I argued in §5.3, nP complements of V are unable to undergo A'-movement, likely because they do not have the features required to trigger such a movement. On

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[37]Additionally in (123), the DP possessor undergoes A'-fronting for focus. See §5.4.1.

[38]It could be argued that this reading is only allowed because the agreement is still reflecting the features of the possessum *'sere* 'car', which in this context introduces masculine φ-features. Again, in such a case, agreement with the possessor is ill-formed.

the other hand, stowed away structures in Spec,nP do have enough structure for these features and therefore are available for A' operations. Given that in possessor raising, inalienable roots appear as nP complements to V, there is no derivational step allowing a body part nP to receive a focus interpretation. If this is true, then the only way to focus body parts should be by stowing them away in Spec,nP of a dummy root using internal possession, allowing them to generate with the features required for A'-movement. This seems to be true. As in (125), when a focus-type interpretation is required of the root *itahs* 'tail', it appears as an alienably-possessed PossP, with the possessor prefix indexing its possessor.

(125)   *Context: Storyboard, slide 5. The lizard is sleeping on a branch and his tail drops.*
         Tó:tis ró:ta's   tánon' raotáhson   tòn:sen'ne'.
         totis   ro-ita'-s   tanon' **rao-itahs-on** t-a'-w-**a's**-en'n-e'
         lizard MsGP-sleep-HAB and   MsGP-tail-NSF CIS-FACT-NA-thing-fall-PUNC
         'The lizard is sleeping and his tail fell.'
         Speaker comment: "If you're really focusing on his tail..."   (McDonald, 2023)

Additionally, the dummy root *a's* appears in the verb, confirming that this focused "theme" is truly stowed away. I take this as more evidence that PossPs are indeed stowed away as the inalienable possessors of dummy roots. I leave for further work why alienable internal possession is used here instead of the inalienable internal possession discussed in §6.3; other sentences involving focus of inalienable roots using alienable possessor prefixes have appeared in my elicitation, but the pattern is as of now unclear.

I have shown that Kanien'kéha alienable possession involves a larger structure than nP, specifically positing a Poss projection which both generates the possessor prefixes for alienable possession as well as merges the alienable possessor in its specifier. Such a structure is supported by both language-internal and language-external observations. Additionally, I have shown that alienably-possessed themes require stowing away, just as would be predicted by the larger size of PossP, suggesting that the stowing away analysis is indeed on the right track.

6.3   Inalienable internal possession

In the last section of this work, I discuss the inalienable type of internal possession. As discussed in §6.2, inalienable roots may take possessor prefixes, but this results in a separable, i.e., alienable, reading of these roots.[39] In order to invoke an attached reading of body part nominals, either possessor raising must be used or a different strategy of internal possession must be used. Given its use for attached readings, I refer to this second method of internal possession as inalienable internal possession.

Inalienable internal possession involves marking the inalienable root with a locative suffix and indexing the possessor on the inalienable root with an agent-set prefix. In (126), the inalienable root *ahsi't* 'foot' is suffixed with the general locative *-'ke* 'on', and the root is marked with an agent prefix *k-* indexing a first person singular possessor.

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[39]Notwithstanding those cases in which focused body parts use alienable possession in the form of possessor prefixes; see the end of §6.2.

(126)   *Context: You've been having foot pain and are at the doctor's. The doctor reads your chart and, not paying attention, starts asking question about and examining your back.*
Kahsi'tà:ke   *í:kehre'*   *ahsátken'se'.*
k-ahsi't-a-**'ke**   i-k-ehr-e'   a-hs-at-ken-'s-e'
1SGA-foot-JR-LOC EP-1SGA-want-PUNC OPT-2SGA-SRFL-see-BEN-PUNC
'I want you to check my foot.'   (McDonald, 2023)

Another clue that this is truly an inalienable possession strategy is the fact that alienable roots may not be possessed in this way. As in (127), marking an alienable root like *atsheronnia* 'clothing' with a locative suffix and indexing its possessor via the first person singular agent prefix *k-* does not result in a possession strategy but rather in ungrammaticality.

(127)   *Context: You're in high school and everyone is talking about how pretty and nice your sister looks today. You, however, are clearly irritated. Your friend asks why you're so mad.*
*Katsheronniahtsherà:ke   *iakótston*   *ne khe'kèn:'a.*
k-atsheronnia-htsher-a-**'ke**   iako-at-st-on   ne khe-'ken-'a
1SGA-clothing-NMLZ-JR-LOC FIP-SRFL-use-STAT NE 1SG>FI-younger.sibling-DIM
Intended: 'My younger sister is wearing my clothes.'   (McDonald, 2023)

This is further support that this style of internal possession is inalienable. As a short summary, the important pieces of inalienable internal possession are that the possessum roots (i) index their possessors with agent-set prefixes, and (ii) must be suffixed by any of locative suffixes. The remainder of this section will be dedicated to determining the structure of inalienable internal possession.

6.3.1   The requirement of the locative

There is a small set of locative suffixes, such as *-kon* 'in', *-akta* 'near, next to', and *-okon* 'under', that attach to nouns to form locational readings of these nouns (Martin, 2023). Note that the locative in inalienable internal possession is non-optional; ungrammaticality results in (128) when the locative is removed from (126).

(128)   *Context: Same as (126).*
*Kahsì:ta   *í:kehre'*   *ahsátken'se'.*
k-ahsi't-a   i-k-ehr-e'   a-hs-at-ken-'s-e'
1SGA-foot-NSF EP-1SGA-want-PUNC OPT-2SGA-SRFL-see-BEN-PUNC
Intended: 'I want you to look at my foot.'   (McDonald, 2023)

Importantly, this ungrammaticality arises from the fact that the locative is formally required for inalienable internal possession, even for simple arguments *without* locational readings. For unpossessed and alienably-possessed nominals, use of a locative suffix on the noun is not available if no location is implied. For example, in the minimal pair in (129), the locative is not allowed with the possessed *atsheronnia* 'clothing' because no locational meaning is appropriate given the context.

(129) *Context: You're in high school and everyone is talking about how pretty and nice your sister looks today. You, however, are clearly irritated. Your friend asks why you're so mad.*

    a. *Akwatsherónnia iakótston   (ne khe'kèn:'a).*
        akw-atsheronnia iako-at-st-on   ne khe-'ken-'a
        1sGP-clothing   FIP-SRFL-use-STAT NE 1SG>FI-younger.sibling-DIM
        'She (my younger sister) is wearing my clothes.'

    b. *#Akwatsheronniahtsherà:ke   iakótston   (ne khe'kèn:'a).*
        akw-atsheronnia-htsher-a-**'ke** iako-at-st-on   ne khe-'ken-'a
        1sGP-clothing-NMLZ-JR-LOC FIP-SRFL-use-STAT NE 1SG>FI-younger.sibling-DIM
        Intended: 'She (my younger sister) is wearing my clothes.'   (McDonald, 2023)

On the other hand, if a locational reading is intended, an unpossessed or alienably-possessed nominal *must* bear a locative suffix. In (130), the context forces a locational reading where the keys are on the table. The contextually correct response is with the locative, due to the required locational reading of *atekhwahra* 'table'. The reading without the locative is clearly degraded and does not give enough information regarding the location of the keys for the answer to be clearly acceptable.[40]

(130) *Context: Your brother is at work and needs keys to get into the building. However, he forgot his keys and calls you asking if you can get them for him. You ask him where the keys are. He responds:*

    a. *Akwatekhwahrahtsherà:ke   kanhotonkwa'tsheráhere'.*
        akw-atekhwahra-htsher-a-**'ke** ka-nhotonkwa-'tsher-a-her-e'
        1sGP-table-NMLZ-JR-LOC   NA-key-NMLZ-JR-on-PUNC
        'The keys are on my table.'

    b. ??*Akwatekhwà:ra kanhotonkwa'tsheráhere'.*
        akw-atekhwahra ka-nhotonkwa-'tsher-a-her-e'
        1sGP-table   NA-key-NMLZ-JR-on-PUNC
        Intended: 'The keys are on my table.'
        Speaker comment: "I wouldn't know they're on the table... I'd have to go around checking different parts of the table."   (McDonald, 2023)

Given these two minimal pairs it can be seen that for unpossessed and alienably-possessed nominals, a locative suffix is used iff a locational reading is entailed.

With this bidirectional implication established, it can be seen that the verb *atken's* 'check, look at' does not require locational theme arguments. In (131), the alienably-possessed theme *nhotonkwa* 'key' of *atken's* appears without a locative suffix. Under the bidirectional implication above, this means that *atken's* does not imply locationally-marked themes.

(131) *Warisó:se í:ienhre   ne akonhotónkwa akátken'se'.*
        Warisose i-ien-ehr-e   ne ako-nhotonkwa a-k-at-ken-'s-e'
        Warisose EP-FIA-want-PUNC NE FIP-key   OPT-1sGA-SRFL-see-BEN-PUNC
        'Warisó:se wants me to check her keys.'   (McDonald, 2023)

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[40]I assume that this is infelicitous and that the reading is somewhat saved by the positional verb *her* 'on' which tells the listener the keys are somewhere above the ground and have some relation to a table.

This means that the ungrammaticality in (128) is not due to the verb requiring a locative-marked theme. Instead, the locative suffix is a requirement of inalienable possession, as has also been noted by Koenig and Michelson (2019). All examples of inalienable possession I collected were deemed ill-formed without the locative suffix.[41]

Note that because of the requirement of the locative suffix in inalienable internal possession, inalienably-possessed nominals are ambiguous between the simple argument readings above and locational adjunct readings. In (126), the inalienably-possessed root *ahsi't* 'foot' occurring with the locative has a purely argumental reading as the theme of the verb. However, in (132), the locative-marked inalienably-possessed root *hnenhs* 'shoulder' is clearly giving a locative reading.

(132)   *Context: Three of us were talking and one fell asleep. We decide to prank him and hit him on the shoulder. When he gets mad at us, our excuse is that there was a mosquito on his shoulder.*
         Okariahtà:ne shnenhsà:ke.
         okariahta'ne   s-hnenhs-a-'ke
         mosquito   2SGA-shoulder-JR-LOC
         'There was a mosquito on your shoulder.'   (McDonald, 2023)

Moreover, although the most general locative suffix used with inalienable internal possession is -*'ke* 'on', any locative suffix may suffice if a more specific location is required (Koenig and Michelson, 2019). The choice of locative form is clearly based on the semantics of location, meaning that at least sometimes inalienably-possessed nominals must have locational adjunct-type readings.

An additional argument for the ambiguous status of inalienably-possessed body parts involves agreement. Recall that with alienably-possessed arguments, verbal agreement may only depend on the φ-features of the possessum, and agreement with the possessor is out. For locative-marked body parts, agreement may either reflect features (or lack thereof) of the possessum *or* reflect the features of the possessor. A minimal pair is in (133).

(133)   *Context: Your niece is having a baby. She's panicking, thinking how she could possibly do this. She says to you she doesn't even know how to hold a baby.*
    a.   *Ne enhsheié:na'*   *ne owirà:'a*   *ontà:'on enhsié:na'*   *ne*
         ne en-hshe-iena-'   ne o-wir-a-'a   onta'on en-**hs**-iena-'   ne
         NE FUT-2SG>FI-hold-PUNC NE NP-baby-NSF-DIM have.to FUT-2SGA-hold-PUNC NE
         ienontsì:ne.
         ie-nontsi-hne
         FIA-head-LOC
         'When you hold a baby you have to cradle its head.'
    b.   *Ne enhsheié:na'*   *ne owirà:'a*   *ontà:'on enhsheié:na'*
         ne en-hshe-iena-'   ne o-wir-a-'a   onta'on en-**hshe**-iena-'
         NE FUT-2SG>FI-hold-PUNC NE NP-baby-NSF-DIM have.to FUT-2SG>FI-hold-PUNC
         ne ienontsì:ne.
         ne ie-nontsi-hne
         NE FIA-head-LOC
         'When you hold a baby you have to cradle its head.'   (McDonald, 2023)

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[41]Save the focus uses of alienable possession for attached readings; see §6.2.

Both sentences have a clause embedded under the modal *onta'on* 'have to' whose apparent theme is the inalienably-possessed *nontsi* 'head', complete with a locative and the agent prefix *ie-* marking a feminine-indefinite possessor. However in the first sentence (133a), the embedded verb shows intransitive agreement, the second person singular agent *hs-*, while in the second (133b), the embedded verb instead shows the agreement prefix *hshe-*, indexing a higher second person singular argument and a lower third person feminine-indefinite argument. It then appears that in (133a) the agreement is based on the (lack of) features of the theme *ienontsihne* '(on) her head', thus resulting in agreement only with the external argument, whereas in (133b), the verbal agreement is reflecting the features of the possessor as well as the external argument. This is in stark contrast to the inability of verbs to agree with possessors in alienable internal possession.

This minimal pair begins to make more sense if inalienably-possessed nominals are ambiguous between argument and locational adjunct readings. In the case of an argument reading, similar to the alienable possession above, the generation of the agent prefix marking the possessor should have made this possessor invisible to further cliticization or Agree relations. The expected verbal agreement alongside the inalienably-possessed theme would then be intransitive, given that the possessor may not Agree with any further functional projections and that body part nominals are neuter. This appears to be exactly the case of (133a). As expected of an inalienably-possessed argument, there is no verbal agreement with the possessor, resulting in the intransitive agent-set agreement observed.

On the other hand, if the inalienably-possessed nominal were to be generated as a locational adjunct, it would leave the theme slot of the verb open and able to be filled by a *pro*. I assume that this is the structure in (133b). Instead of generating as a theme, the inalienably-possessed nominal is a locational adjunct, with a *pro* being generated as the theme. I assume both this theme *pro* and the *pro* possessor in the adjunct are able to become coreferential in the normal way pronouns receive their referents. The theme *pro* then has the same φ-features as the *pro* possessor in the locational adjunct. The verbal agreement then appears to reflect the features of the *pro* possessor of the body part nominal *ienontsihne*, but instead it reflects a theme *pro*, which also happens to have third person feminine-indefinite features. The sentence in (133b) then is roughly equivalent to 'You have to hold her by her head.' The apparent asymmetry between inalienable and alienable internal possession vis-à-vis the ability of the verb to agree with the possessor naturally vanishes with the fact that inalienably-possessed body parts marked with locatives can serve both argumental and locational adjunct functions.

6.3.2   Locative-marked structures as nominals

Baker (1996) discusses the locative suffixes as prepositional in nature, arguing that due to his Morphological Visibility Condition, PPs (i.e., locative-marked nominals) cannot serve as arguments. I assume in this work that Kanien'kéha does not have a separate class of prepositions.[42] I argue that the locative-marked items are nominal in nature, given their symmetry with nominals. This will naturally extend to my analysis of inalienable possession. There are five main arguments in favor

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[42]There are a few reasons I discard the prepositional analysis in this work. For one, Baker (1996) does not support his view that the locative suffixes are prepositions; rather, he assumes they are so. Second, most directional and locational signaling requiring use of prepositions in other languages is done with verbal morphology in Kanien'kéha. It is unclear why a separate class of prepositions is needed, given the large body of work (e.g., Michelson, 2023) that has shown Northern Iroquoian languages typically only have four parts of speech, none of them prepositions.

of viewing locative-marked complexes as nominals.

First, I have shown some evidence above that an account where locative-marked nominals can serve as arguments correctly predicts agreement facts. More transparent evidence that locative-marked nominals can serve as arguments is in (1).

(134)   *Context: A man was in a coma and just woke up. We want to test to see if his arm still works. He lifts it.*

      Tsioió'te'   *ne ranentshà:ke.*
      s-io-io't-e'   ne ra-nentsh-a-'ke
      REP-NP-work-STAT NE MsGA-arm-JR-LOC
      'His arm still works.'   (McDonald, 2023)

As Baker (1996) has shown, the root *io't* 'work' is an unergative verb. In this case then, the locative-marked nominal *ranentsha'ke* 'his arm' must be the external argument of the verb. Note that, as expected if this locative-marked nominal is a subject, neuter agreement, the neuter patient prefix *io-*, appears on the verb. The ability of locative-marked nominals to serve as arguments is support for an analysis in which these are nominals, seeing as argument position is restricted to nominals.

Second, Kanien'kéha nominals and verbs display differing behavior with regards to negation. Negation for both nouns and verbs is bipartite, involving the negative particle *iah* occurring alongside another negative marker. Verbs are typically negated as in (135), the preverbal negative particle *iah* co-occurring with a prefix on the verb itself. The negative prefix is typically the negative prefix *te-* as in (135), but alongside certain verbal morphology, for example the duplicative prefix *te-*, the optative modal prefix *a-*, and the translocative prefix *ie-*, the contrastive prefix *tha'-* is used instead (Martin, 2023).

(135)   *Iah   tehatórie's.*
      iah   te-h-atori-e's
      NEG NEG-MsGA-drive-HAB
      'He doesn't drive.'   (McDonald, 2023)

In contrast, nouns are not directly prefixed with the negative prefix. Instead, the root *ken* 'be' appears after the nominal as a *do*-support type element in order to host the negative prefix. This is illustrated in (136).

(136)   *Iah kanónhsa'   té:ken.*
      iah ka-nonhs-a'   **te**-ken
      NEG NA-house-NSF NEG-be
      'It is not a house.'   (McDonald, 2023)

In order to negate inalienably-possessed body part nominals marked with locative suffixes, the nominal strategy of negation appears. Just as in (136), the locative-marked *ronhkwe'n* 'back' appears with the preverbal particle *iah* in (137), and the dummy root *ken* 'be' appears to host the negative prefix.

(137)   *Context: You're at the doctor's office with knee pain. You have a history of back pain though, so the doctor comes in and starts questions about your back and tells you the tests on your back he will run. You correct him.*
   Iah keronhkwe'nà:ke   (té:ken), kkwitshà:ke.
   iah ke-ronhkwe'n-a-'ke te-ken k-kwitsh-a-'ke
   NEG 1SGA-back-JR-LOC   NEG-be 1SGA-knee-JR-LOC
   'Not my back, my knee.'   (McDonald, 2023)

Although the inclusion of the negated dummy root *teken* is optional, locative-marked body part nominals behave more like nominals than verbs on this test, as (138) attests, locative-marked body parts are barred from being directly prefixed with the negative prefix *te-*.

(138)   *Context: You're at the doctor's office with knee pain. You have a history of back pain though, so the doctor comes in and starts questions about your back and tells you the tests on your back he will run. You correct him.*
   *Iah tekeronhkwe'nà:ke   (teiononhwákte'), kkwitshà:ke   iononhwákte'.
   iah **te**-ke-ronhkwe'n-a-'ke te-io-nonhwakt-e' k-kwitsh-a-'ke io-nonhwakt-e'
   NEG NEG-1SGA-back-JR-LOC NEG-NP-hurt-STAT 1SGA-knee-JR-LOC NP-hurt-STAT
   Intended: 'My back doesn't hurt, my knee hurts.'   (McDonald, 2023)

   Another test for the category of locative-marked clauses involves the ability to predicate location. To make a simple locational statement, both a location (marked with a locative suffix) as well as a positional verb are required. This is exemplified by (139). Here, the nominal root *hwist* 'money' is incorporated into the positional predicate *i* 'inside', with the locational argument of *i* being the nominal marked with the locative *-kon* 'in'. This nominal specifies the location that is the money is to be interpreted as inside of.

(139)   *Tkahwísti   ne ake'seréhtakon.*
   t-ka-hwist-i   ne ake-'sere-ht-a-kon
   CIS-NA-money-inside[STAT] NE 1SGP-car-NMLZ-JR-LOC
   'There's money in my car.'   (McDonald, 2023)

In contrast, (140) shows that the locative-marked *'sere* 'car' is not enough to predicate location of the money on its own; instead, the positional root is still required to predicate location.

(140)   *Ohwísta'   ne ake'seréhtakon   ítewa.*
   o-hwist-a'   ne ake-'sere-ht-a-kon   *(i-te-w-a)
   NP-money-NSF NE 1SGP-car-NMLZ-JR-LOC   EP-CIS-NA-in[STAT]
   'There's money in my car.'   (McDonald, 2023)

This places locative-marked clauses in contrast to verbs which by definition predicate. The inability of locative-marked clauses to predicate is instead shared with nominals. For a nominal to predicate, the dummy verb *ken* 'be' must appear, as displayed in (141).

(141)   *Kanónhsa'   í:ken.*
   ka-nonhs-a'   i-ken
   NA-house-NSF EP-be
   'It's a house.'

A nominal by itself is unable to predicate; without the copular-like *ken* 'be', the interpretation is no longer predicative (142).

(142)   *Kanónhsa'.*
        ka-nonhs-a'
        NA-house-NSF
        'House.' (i.e., if you're pointing at a house)

Yet again, locative-marked clauses pattern with nominals as opposed to verbs.

One last argument is that negation and tense, aspectual, and mood (TAM) information are not marked on locative-marked clauses, but instead on the locational verbs that accompany them in location statements. For example, for the negative locational statement in (143), the negation prefix appears on the positional verb rather than on the locative-marked clause.

(143)   *Iah ake'seréhtakon   tétewa   ne ohwísta',   atekhwahráhne*
        iah ake-'sere-ht-a-kon   **te**-te-w-a   ne o-hwist-a'   atekhwahra-hne
        NEG 1SGP-car-NMLZ-JR-LOC NEG-CIS-NA-in[STAT] NE NP-money-NSF table-LOC
        tkáhere'.
        t-ka-her-e'
        CIS-NA-on-STAT
        'The money isn't in my car, it's on the table.'   (McDonald, 2023)

The corresponding form where the locative-marked clause, rather than the positional verb, is negated with the negation prefix is ungrammatical:

(144)   **Iah tewake'seréhtakon   ítewa   ne ohwísta',*
         iah **te**-wake-'sere-ht-a-kon   i-te-w-a   ne o-hwist-a'
         NEG NEG-1SGP-car-NMLZ-JR-LOC EP-CIS-NA-in?[STAT] NE NP-money-NSF
        atekhwahráhne tkáhere'.
        atekhwahra-hne t-ka-her-e'
        table-LOC   CIS-NA-on-STAT?
        Intended: 'The money isn't in my car, it's on the table.'   (McDonald, 2023)

As I have already shown, nominals may not take negation prefixes and require a verb root to host the negation prefix when negated. This is mirrored by the behavior of locative-marked clauses in (143) and (144); the prefix must appear on a positional verbal root rather than the locative-marked item. This is another point in favor of locative-marked items being nominal in nature.

Similarly, any TAM morphology must appear on the positional verb as well. The future in Kanien'kéha is marked via the modal prefix *en-*. This prefix appears on the positional verb *hr* 'on' rather than the locative-marked *atekhwahrahne* 'on the table' in example (145a) below.

(145)   *Context: I'm leaving my kids at home this evening. I'll be gone when they get home. I'm leaving them the keys to the car so they can go driving.*

a.   **Kahnotónkwa** *atekhwahráhne enkà:rake   nó:nen*
ka-hnotonkw-a   atekhwahra-hne atekhwahra-htsher-a-'ke
NA-key-NSF   table-LOC   table-NMLZ-JR-LOC
entsísewawe'.
en-ka-hr-a-k-e   nonen en-tsi-sewa-w-e'
FUT-NA-on-JR-CONT-STAT when FUT-REP-2SGA-arrive-PUNC
'The keys will be on the table when you guys get back.'

b.   **Kahnotónkwa enwatekhwahráhne kà:rake   nó:nen*
ka-hnotonkw-a **en**-w-atekhwahra-hne ka-hr-a-k-e   nonen
NA-key-NSF   FUT-NA-table-LOC   NA-on-JR-CONT-STAT when
entsísewawe'.
en-tsi-sewa-w-e'
FUT-REP-2SGA-arrive-PUNC
Intended: 'The keys will be on the table when you guys get back.'

However, the form in (145b) shows that the modal prefix *en-* may not attach to the locative-marked item in order to create a future locational reading. In attempting to attach *en-* to the locative-marked *atekhwahrahne* 'on the table', ungrammaticality obtains. Verbs may be freely prefixed with TAM morphology; multiple examples exist throughout this work. On the other hand, nominals may not take TAM morphology. As in (146a), the form with the future modal prefix *en-* attaching directly to the nominal *kanonhsa'* 'house' does not result in a well-formed sentence, even if the nominal appears alongside the dummy verb *ken*. The correction (146b) involves prefixation of the future *en-* to the dummy *ken* 'be' in order to host the *en-* prefix.

(146)   *Context: My friend and I walk past a construction site and they ask what will be built there.*

a.   **Enkanónhsa'   kénhake.*
en-ka-nonhs-a'   ken-hak-e
FUT-NA-house-NSF be-CONT-STAT
Intended: 'It will be a house.'

b.   *Kanónhsa'   enkénhake.*
ka-nonhs-a'   en-ken-hak-e
NA-house-NSF FUT-be-CONT-STAT
'It will be a house.'   (McDonald, 2023)

This pattern for nominals matches that of the locative-marked clauses, while differing from the behavior of verbs. I have therefore presented four arguments that locative-marked items are nominal in nature. With this in mind, I suggest that inalienable internal possession must mirror that of unpossessed unincorporated nominals.

6.3.3   Locatives and the generation of agent-set prefixes

Due to the simultaneous presence of locatives alongside the agent-set prefixes in inalienable possession, one analysis might reasonably posit that the head exponed by the locatives results in the

generation of the agent-set prefixes. I will argue that this cannot be correct, which will lead to my proposal for the structure of inalienable internal possession.

Certain functional material has been known to alter agreement patterns in Northern Iroquoian. One examples is stative shift. Recall that Kanien'kéha agreement is "split-S": some intransitive verbs take agent-set prefixes while others take patient-set prefixes. However, when intransitive verbs occur in the stative aspect, they always take patient-set prefixes, even if they appear with agent-set prefixes in the other aspects. An example is in (147). The verb *atori* 'drive' takes agent-set agreement in the habitual and punctual aspects, but the agreement changes to the patient-set in the stative aspect in (147c).

(147)   a. *Habitual aspect*
            Katórie's.
            k-atori-e's
            1SGA-drive-HAB
            'I drive.'

        b. *Punctual aspect*
            Wa'kató:ri'.
            wa'-**k**-atori-'
            FACT-1SGA-drive-PUNC
            'I drove.'

        c. *Stative aspect*
            Wakatórion.
            wak-atori-on
            1SGP-drive-STAT
            'I have driven.'   (DeCaire, 2016)

A similar phenomenon occurs with stative-only verbs. Stative-only verbs always assign an intransitive agreement set to their argument. This can be either the agent set or patient set, but unlike the stative shift above, this agreement set is always the same for a given verb. For example, the stative-only verb *es* 'long' assigns agent-set agreement in (148), reflected by the neuter agent prefix *ka-*.

(148)   *kanónhses*
        ka-nonhs-es
        NA-house-long[STAT]
        'a long house'   (Martin, 2023, K.)

Importantly, the agreement set assigned by a stative-only verb can shift the set of agreement that the nominal takes when it is freestanding. As an example, the root *'whahs* 'skirt' appears with the patient-set prefix *o-* when it occurs as a freestanding nominal.

(149)   *o'wháhsa'*
        o-'whahs-a'
        NP-skirt-NSF
        'skirt'   (McDonald, 2017)

However, when occurring with the stative-only verb *ra'ken* 'white', which assigns agent-set agreement, the normal patient-set marking occurring with *'whahs* is overridden and the neuter agent-set *ka-* appears.

(150)   *ka'whahsarà:ken*
        ka-'whahs-a-ra'ken
        NA-skirt-JR-white[STAT]
        'a white skirt'   (Martin, 2023, K.)

Both of these cases show that functional and lexical material can have some effect on the set of intransitive agreement displayed. In this case, it might be expected that the locative suffixes simply assign agent-set agreement in the way that, say, certain stative-only verbs do. I will show that this is not the case.

    If the locative were to assign agent-set agreement, this behavior should appear among all locatives, including those attaching to unpossessed nominals in order to form locational readings of these nominals. In these cases, the locative-assigned agent-set agreement should override the usual set of agreement for the unincorporated nominal the locative is suffixed to, just as the stative-only *ra'ken* 'white' overrides the usual unincorporated agreement set for the root *'whahs* 'skirt'. This means that there should be no locative-marked items that occur with patient-set prefixes. This is false.

    As in (151), the root *hson'kar* 'floor, lumber' takes the neuter patient-set prefix *o-* when occurring as an unincorporated nominal.

(151)   *ohsòn:kare'*
        o-hson'kar-e'
        NP-floor-NSF
        'floor, boards, lumber'   (McDonald, 2019)

Under the analysis that locatives assign agent-set prefixes, it is expected that *hson'kar* 'floor' should appear with the neuter agent prefix *ka-* when suffixed with a locative. Contrary to this expectation, when *hson'kar* is suffixed with the locative *-'ke*, the agreement is still the neuter patient *o-*.

(152)   *ohson'karà:ke*
        o-hson'kar-a-'ke
        NP-floor-JR-LOC
        'on the floor'   (McDonald, 2023)

This means that the agent prefixes cannot be generated by the locative.

6.3.4   Towards an account of inalienable possession

In the last subsection of this section, I discuss a preliminary account of inalienable internal possession. Due to the clear inalienable nature of this possession strategy, I assume it is built on the same structure of inalienable possession introduced earlier, in which the inalienably-possessed root combines with a n that projects a specifier to host the inalienable possessor. This is schematized in (153), repeated from (95).

(153)

nP

XP
POSSESSOR   n   √POSSESSUM
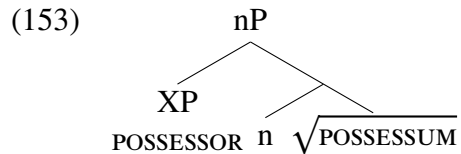
I then use the two previous arguments in this section to form a more complete account. The first argument—that locative-marked items are nominal in nature—suggests an account where locative-marked items mirror freestanding nominals. The second argument—that locative suffixes do not assign agent-set prefixes—suggests that agent-set agreement must arise in a different way.

Capitalizing on the symmetry between locative-marked items and unincorporated nominals, I suggest that the locative suffixes expone the same head as the noun suffixes found on basic unincorporated nominals. I remain agnostic as to what exactly this head is. However, there are clear similarities between the locative and the noun suffix. Both appear final in the unincorporated m-word. Additionally, both appear outside of overt nominalizers. The locative appears after the overt nominalizer *-htsher* in (154), just as nominal suffixes do (see 90 in §5.1.1).

(154)   *akwatokwahtsherà:ke*
        akw-atokwa-**htsher**-a-**'ke**
        1SGP-spoon-NMLZ-JR-LOC
        'on my spoon'   (McDonald, 2019)

Both of these properties suggest that the noun suffix and the locative expone heads higher than nP in the nominal spine, a welcome result seeing as locative-marked items appear external to the verbal complex and therefore must not be nPs. Lastly, the locative and noun suffix are in complementary distribution. This cannot be seen for many roots, as exemplified by (155). The root *ien'kw* 'tobacco' has a nominal suffix of the form *-a'*, and thus in (155b), it is possible that the locative *-'ke* actually attaches outside of the nominal suffix.

(155)   a.   *oièn:kwa'*
             o-ien'kw-**a'**
             NP-tobacco-NSF
             'tobacco'   (McDonald, 2019)

        b.   *saien'kwà:ke*
             sa-ien'kw-**a**-'ke
             2SGP-tobacco-?-LOC
             'on your tobacco'   (McDonald, 2019)

Nevertheless the complimentarity of the two can be seen with a root like *'wahr* 'meat'. As in (156a), repeated from (91a), the root *'wahr* takes the nominal suffix *-on*. When the root *'wahr* 'meat' appears with a locative in (156b), the *-a* appears instead of the *-on*. In fact, the locative cannot be added onto *-on* as shown in (156c). This suggests that the *a* is a joiner as found in the verbal stem, and that the noun suffix and locative suffixes are in complimentary distribution.

(156)   a.   *o'wà:ron*
             o-'wahr-**on**
             NP-meat-NSF
             'meat'   (McDonald, 2017)

b. *ake'wahrà:ke*
   ake-'wahr-**a**-'ke
   1SGP-meat-JR-LOC
   'on my meat'   (McDonald, 2019)

c. **o'wahròn:ke*
   o-'wahr-**on**-'ke
   NP-meat-NSF-LOC
   Intended: 'on the meat'   (McDonald, 2023)

This symmetry partly explains the second argument: that locatives do not assign agent-set prefixes. The same noun suffix appears with both roots taking agent-set marking and roots taking patient-set marking. For example, while *-on* appears with the root *'wahr* 'meat' taking patient-set marking in (156a), it also appears with the root *itsi* 'fish' taking agent-set marking as in (157).

(157)   *kéntsion*
        ken-itsi-on
        NA-fish-NSF
        'fish'   (McDonald, 2017)

Clearly, nominals receive these prefixes from some other functional projection rather than from the noun suffixes themselves. Similarly, I propose the same happens with locative-marked body parts in inalienable internal possession. Whatever higher head results in the generation of prefixes for unpossessed unincorporated nominals also generates the agent prefixes in inalienable internal possession. The only difference is that, since the possessor in Spec,nP has φ-features, the probe in charge of prefixes will generate an agent prefix that reflects the features of the possessor, rather than generating a neuter prefix by default due to failed Agree as it does with most unpossessed nominals. The structure I then propose for inalienable internal possession (158) is almost identical to the structure I proposed in §5.1.1 for unincorporated nominals.

(158)
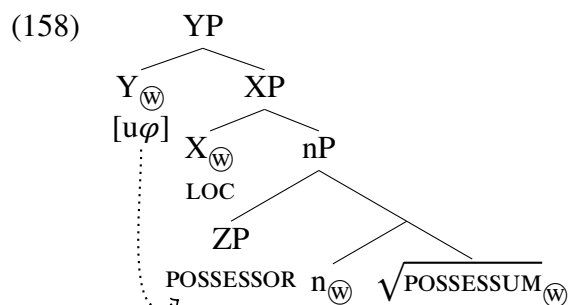
As before, I am agnostic as to the true identity of the X and Y heads; I leave these for future work. As in the case of unincorporated nominals, the X head is what expones as the locative (or noun suffix in unincorporated nominals) and the Y head contains a φ-probe that searches its c-command domain. Additionally, as in unincorporated nominals, the heads in the YP undergo the morphological word-building mechanism; this both accounts for the ordering but also accounts for the appearance of the joiner in between roots/nominalizers and the locative—recall that the appearance of the joiner was indeed what motivated the word-building apparatus in the verbal domain.

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The main difference between the structure of unincorporated nominals and inalienable internal possession is that, in the latter case, the nP contains a possessor in its specifier and since body part nominals are always neuter, there is never a PersP layer projected. In this case, the φ-probe on Y will probe its c-command domain and always find the φ-features of the possessor in Spec,nP resulting in an agent prefix reflecting the φ-features of the possessor, rather than a default neuter prefix reflecting the lack of φ-features on the body part nominal itself. This concludes the section on inalienable internal possession.

7 Conclusion

The main purpose of this work was to re-examine the facts of noun incorporation in Kanien'kéha, with the argument that incorporated and excorporated variants, which have in most previous work been taken as derivable from each other, are in fact not derivationally related and result from different underlying structures. Crucially, I have proposed that this is immediately derivable with the singular stipulation that internal argument-selecting V must merge with nP in Kanien'kéha. I argued that incorporation is the pragmatic "default" because it results from a crosslinguistically unmarked structure in which the theme nP merges with V, with incorporation itself arising simply as part of a general word-building mechanism that applies within the VoiceP domain. On the other hand, excorporated nominals, due to their size, may not merge with V and thus are not generated as themes at all. Rather these nominals are "stowed away" into the derivation, generating as the inalienable possessors of a dummy root. The nP containing this dummy root and the unincorporated nominal merges with V, resulting in the incorporation of the dummy root, which is not always morphologically overt, and the stranding of the unincorporated nominal through the application of the morphological word-building mechanism. I further argued that the specifier position of the stowed away nominal allows it to undergo A- and A'-movement—operations disallowed for true themes of V—and as such the proposal predicts the information structural effects of excorporation.

While this line of argumentation represents the heart of this work, along the way I argued that the restriction of complements of V to nPs can account for animacy restrictions, agreement facts, internally-headed relative clauses, and verbal behavior with alienably-possessed themes. Additionally, I argued for accounts of possessor raising and alienable internal possession, as well as sketches of the structure of unincorporated nominals and inalienable internal possession.

Despite the breadth of this work, I was unable to cover all the puzzles surrounding the topics introduced in this work. First, I have excluded the idiomatic incorporation discussed in Renard, 2023 and its potential structural differences, as well as stative-only verbs which, unlike the vast majority of verbs, require incorporation and receive no excorporated variant. I additionally did not give an account for verbs that may not incorporate apparent themes. I have left for further research more fine-grained analyses of the higher nominal domain, specifically the identity of heads that expone as noun suffixes and agreement prefixes on nouns. I also leave for further research a specific account of the joiner and its inclusion in the word-building mechanism.

I left undiscussed two important areas of noun incorporation in Kanien'kéha. One is whether this account may extend to doubling phenomenon, in which an incorporated root is doubled by an identical or more specific unincorporated nominal (as in the Type IV incorporation of Mithun, 1984). The other is whether it may also capture the fact that agreement may variably reference incorporated animate themes. Due to reasons of space, I was unable to cover these facts. Neverthe-

less, an account in which Kanien'kéha roots denote kinds may naturally extend my analysis to both of these phenomena; I leave this for future research. I nevertheless have argued that incorporation is in a sense unremarkable, arising out of independently proposed mechanisms for other languages, and that the seeming equivalence between incorporated and excorporated material does not imply their structural equivalence.

References

Akkuş, Faruk and Lefteris Paparounas (2024). "Reflexivization via movement: Evidence from Turkish verbal reflexives". Poster presented at the 54th Annual Meeting of the North East Linguistics Society (NELS 54), Cambridge, MA.

Alexiadou, Artemis (2003). "Some notes on the structure of alienable and inalienable possessors". In: *The expression of possession in noun phrases*. Ed. by Martine Coene and Yves D'hulst. Vol. 2. From NP to DP. Amsterdam: John Benjamins, pp. 167–188.

Alexiadou, Artemis and Elena Anagnostopoulou (2004). "Voice morphology in the causative–inchoative alternation: Evidence for a non-unified structural analysis of unaccusatives". In: *The unaccusativity puzzle: Explorations of the syntax-lexicon interface*. Ed. by Artemis Alexiadou, Elena Anagnostopoulou, and Martin Everaert. Oxford studies in theoretical linguistics. Oxford: Oxford University Press, pp. 114–136.

Alexiadou, Artemis, Elena Anagnostopoulou, and Florian Schäfer (2006). "The properties of anticausatives crosslinguistically". In: *Phases of interpretation*. Ed. by Mara Frascarelli. Berlin: Mouton de Gruyter, pp. 187–212.

— (2015). *External arguments in transitivity alternations: A layering approach*. Oxford: Oxford University Press.

Anagnostopoulou, Elena (2003). *The syntax of ditransitives: Evidence from clitics*. Berlin: Mouton de Gruyter.

Arad, Maya (2003). "Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs". In: *Natural Language and Linguistic Theory* 21, pp. 737–778.

Arregi, Karlos and Asia Pietraszko (2021). "The ups and downs of head displacement". In: *Linguistic Inquiry* 52.2, pp. 241–289.

Baker, Mark C. (1985). "The Mirror Principle and morphosyntactic explanation". In: *Linguistic Inquiry* 16, pp. 373–415.

— (1988). *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

— (1996). *The Polysynthesis Parameter*. New York: Oxford University Press.

— (1999). "External possession in Mohawk: Body parts, incorporation, and argument structure". In: *External possession*. Ed. by Doris L. Payne and Immanuel Barshi. Amsterdam: John Benjamins, pp. 293–323.

— (2006). "On zero agreement and polysynthesis". In: *Arguments and agreement*. Ed. by Peter Ackema, Patrick Brandt, Maaike Schoorlemmer, and Fred Weerman. Oxford: Oxford University Press, pp. 289–320.

— (2009). "Is head movement still needed for noun incorporation?" In: *Lingua* 119.2, pp. 148–165.

Baker, Mark C., Roberto Aranovich, and Lucía A. Golluscio (2005). "Two types of syntactic noun incorporation: Noun incorporation in Mapudungun and its typological implications". In: *Language* 81.1, pp. 138–176.

Baker, Mark C. and Jonathan Bobaljik (2017). "On inherent and dependent theories of ergative case". In: *The Oxford Handbook of Ergativity*. Ed. by Jessica Coon, Diane Massam, and Lisa Demena Travis. Oxford: Oxford University Press, pp. 111–134.

Banerjee, Neil (2019). "Templatic morphology through syntactic selection: Valency-changing extensions in Kinyarwanda". In: *Glossa* 4.1, p. 112.

Barrie, Michael (2015). "Two kinds of structural noun incorporation". In: *Studia Linguistica* 69.3, pp. 237–271.

Barrie, Michael and Sihun Jung (2020). "The Northern Iroquoian nominalizer and lexical categories". In: *Canadian Journal of Linguistics* 65.1, pp. 1–24.

Barrie, Michael and Éric Mathieu (2016). "Noun incorporation and phrasal movement". In: *Natural Language and Linguistic Theory* 34, pp. 1–51.

Béjar, Susana (2003). "Phi-syntax: A theory of agreement". PhD thesis. Toronto: University of Toronto.

Béjar, Susana and Milan Rezac (2003). "Person licensing and the derivation of PCC effects". In: *Romance linguistics: Theory and acquisition*. Ed. by Ana Teresa Perez-Leroux and Yves Roberge. Amsterdam: John Benjamins, pp. 49–62.

Belletti, Adriana and Luigi Rizzi (1988). "Psych-verbs and θ-theory". In: *Natural Language and Linguistic Theory* 6.3, pp. 291–352.

Bhatt, Rajesh (2002). "The raising analysis of relative clauses: Evidence from adjectival modification". In: *Natural Language Semantics* 10, pp. 43–90.

Bittner, Maria (1994). *Case, scope and binding*. Dordrecht: Kluwer.

Boles, Chase (2023). "Getting the -ik: An anticausative structure in Kirundi". In: *Toronto Working Papers in Linguistics* 46.1.

Bonvillain, Nancy (1973). *A grammar of Akwesasne Mohawk*. Ottawa, ON: National Museum of Man.

Bonvillain, Nancy and Beatrice Francis (1980). "The bear and the fox, in Akwesasne Mohawk". In: *Northern Iroquoian texts*. Ed. by Marianne Mithun and Hanni Woodbury. Chicago: University of Chicago Press, pp. 77–95.

Bošković, Željko (2008). "What will you have, DP or NP?" In: *Proceedings of the 37th annual meeting of the North East Linguistic Society*.

Chafe, Wallace (1976). "Givenness, contrastiveness, definiteness, subjects, topics, and point of view". In: *Subject and topic*. Ed. by Charles Li. Academic Press, pp. 22–55.

— (2012). "Are adjectives universal? The case of Northern Iroquoian". In: *Linguistic Typology* 16, pp. 1–39.

Chierchia, Gennaro (1998). "Reference to kinds across language". In: *Natural Language Semantics* 6.4, pp. 339–405.

Chomsky, Noam (1981). *Lectures on government and binding*. Dordrecht: Foris.

— (2000). "Minimalist inquiries: The framework". In: *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. Ed. by Roger Martin, David Michaels, and Juan Uriagereka. Cambridge, MA: MIT Press, pp. 89–155.

— (2001). "Derivation by phase". In: *Ken Hale: A life in language*. Ed. by Michael Kenstowicz. Cambridge, MA: MIT Press, pp. 1–52.

Chung, Sandra and William A. Ladusaw (2004). *Restriction and saturation*. Cambridge, MA: MIT Press.

Commanda, Kurtis (2022). *Verbal agreement in Kanyen'keha*. Master's Thesis, McMaster University. Hamilton, ON.

Compton, Richard and Christine Pittman (2010). "Word-formation by phase in Inuit". In: *Lingua* 120.9, pp. 2167–2192.

Coon, Jessica (2017). "Little-v^0 agreement and templatic morphology in Ch'ol". In: *Syntax* 20.2, pp. 101–137.

— (2019). "Building verbs in Chuj: Consequences for the nature of roots". In: *Journal of Linguistics* 55.1, pp. 35–81.

— (2023). *The syntax of Northern Iroquoian pronominal prefixes*. Ms., McGill University.

Coon, Jessica, Nico Baier, and Theodore Levin (2021). "Mayan agent focus and the Ergative Extraction Constraint: Facts and fictions revisited". In: *Language* 97.2, pp. 269–332.

Coon, Jessica and Stefan Keine (2021). "Feature gluttony". In: *Linguistic Inquiry* 52, pp. 655–710.

Crippen, James A. (2019). "The syntax in Tlingit verbs". PhD thesis. Vancouver, BC: University of British Columbia.

Danon, Gabi (2006). "Caseless nominals and the projection of DP". In: *Natural Language and Linguistic Theory* 24, pp. 977–1008.

— (2011). "Agreement and DP-internal feature distribution". In: *Syntax* 14.4, pp. 297–317.

Dayal, Veneeta (2004). "Number marking and (in)definiteness in kind terms". In: *Linguistics and Philosophy* 27.4, pp. 393–450.

— (2011). "Hindi pseudo-incorporation". In: *Natural Language and Linguistic Theory* 29, pp. 123–167.

Deal, Amy Rose (2017). "External possession and possessor raising". In: *The Wiley Blackwell Companion to Syntax, Second Edition*. Ed. by Martin Everaert and Henk C. van Riemsdijk. John Wiley Sons, Inc.

DeCaire, Oheróhskon Ryan (2023). "The role of adult immersion in Kanien'kéha revitalization". PhD thesis. University of Hawai'i at Hilo.

DeCaire, Ryan (2016). "Kanien'kéha verb forms". Class materials, University of Toronto.

— (forthcoming). *Assessing Kanien'kéha vitality*. Journal article.

DeCaire, Ryan, Alana Johns, and Ivona Kučerová (2017). "On optionality in Mohawk noun incorporation". In: *Toronto Working Papers in Linguistics* 39.

Déchaine, Rose-Marie and Martina Wiltschko (2002). "Decomposing pronouns". In: *Linguistic Inquiry* 33.3, pp. 409–442.

Deering, Nora and Helga Delisle (1976). *Mohawk: A teaching grammar*. Kahnawà:ke: Thunderbird Press.

Diesing, Molly (1992). *Indefinites*. Cambridge, MA: MIT Press.

Diesing, Molly and Eloise Jelinek (1995). "Distributing arguments". In: *Natural Language Semantics* 3.2, pp. 123–176.

Drossard, Werner (1997). "Polysynthesis and polysynthetic languages in comparative perspective". In: *Proceedings of linguistics and phonetics 1996*. Ed. by B. Palek. Prague: Charles University Press, pp. 251–264.

Dyck, Carrie (2009). "Defining the word in Cayuga (Iroquoian)". In: *International Journal of American Linguistics* 75.4, pp. 571–605.

Folli, Raffaella and Heidi Harley (2004). "Flavors of v: Consuming results in Italian and English". In: *Aspectual inquiries*. Ed. by Roumyana Slabakova and Paula Kempchinsky. Dordrecht: Kluwer, pp. 95–120.

Forbes, Clarissa (2019). "Number, names, and animacy: Nominal classes and plural interactions in Gitksan". In: *Gender and noun classification*. Ed. by Éric Mathieu, Myriam Dali, and Gita Zareikar. Oxford studies in theoretical linguistics. Oxford: Oxford University Press. Chap. 10, pp. 203–233.

Fortescue, Michael (2017). "What are the limits of polysynthesis". In: *The Oxford Handbook of Polysynthesis*. Ed. by Michael Fortescue, Marianne Mithun, and Nicholas Evans. Oxford: Oxford University Press. Chap. 7, pp. 115–134.

Fortescue, Michael, Marianne Mithun, and Nicholas Evans, eds. (2017). *The Oxford Handbook of Polysynthesis*. Oxford: Oxford University Press.

Gatchalian, Terrance (2024). "Two optional past tenses in Kanien'kéha". Presented at Syntax-Semantics Reading Group/MULL, Montréal, QC.

Grimshaw, Jane (1990). *Argument structure*. Cambridge, MA: MIT Press.

Hale, Kenneth and Samuel Jay Keyser (2002). *Prolegomena to a theory of argument structure*. Cambridge, MA: MIT Press.

Halle, Morris and Alec Marantz (1993). "Distributed morphology and the pieces of inflection". In: *The view from building 20*. Ed. by Kenneth Hale and Samuel Jay Keyser. Cambridge, MA: MIT Press, pp. 111–176.

Harizanov, Boris and Vera Gribanova (2019). "Whither head movement?" In: *Natural Language and Linguistic Theory* 37, pp. 461–522.

Harley, Heidi (1995). "Subjects, events, and licensing". PhD thesis. Cambridge, MA: MIT.

— (2008). "On the causative construction". In: *The Oxford handbook of Japanese linguistics*. Ed. by Shigeru Miyagawa. Oxford: Oxford University Press, pp. 20–53.

— (2014). "On the identity of roots". In: *Theoretical Linguistics* 40.3/4, pp. 225–276.

— (2017). "The 'bundling' hypothesis and the disparate functions of little v". In: *The verbal domain*. Ed. by Roberta D'Alessandro, Irene Franco, and Ángel J. Gallego. Oxford: Oxford University Press, pp. 3–28.

Harley, Heidi and Elizabeth Ritter (2002). "Person and number in pronouns: A feature-geometric analysis". In: *Language* 78, pp. 482–526.

Henderson, Robert (2017). "Pluractionality in Mayan". In: *The Mayan languages*. Ed. by Judith Aissen, Nora England, and Roberto Zavala Maldonado. Oxford: Routledge, pp. 362–376.

Henhawk, Stephen Arrell and John Whitman (2024). "A-movement and interpretation in a Northern Iroquoian language". Poster presented at the 54th Annual Meeting of the North East Linguistics Society (NELS 54).

Horne, Josephine Warisó:se Kaieríthon (1976a). "Kana'tarokhón:we". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., pp. 44–47.

— (1976b). "Iehwista'ékstha'". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. University of the State of New York, State Education Dept., pp. 23–26.

Jacobs, Annette Á:nen Kaia'titáhkhe' (1976a). "Tsik a tsik, tsik a tsik, tsik a tsik". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., pp. 66–68.

Jacobs, Annette Á:nen Kaia'titáhkhe' (1976b). "Ateró:sera'". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., pp. 52–53.

Jacobs, Carolee Konwatièn:se' (1976c). "Sha'tewahsirí:hen". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., pp. 11–12.

Jacobs Jr., Frank Tekaronhió:ken (1976). "Tiawerón:ko kanéhon oká:ra'". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., pp. 21–22.

Jelinek, Eloise (1984). "Empty categories, case, and configurationality". In: *Natural Language and Linguistic Theory* 2, pp. 39–76.

Kalin, Laura (2018). "Licensing and differential object marking: The view from Neo-Aramaic". In: *Syntax* 21.2, pp. 112–159.

Kanu, Sullay Mohamed (2009). "Suffix ordering in Temne: A case for morphotactics". In: *Selected Proceedings of the 38th Annual Conference on African Linguistics*. Ed. by Masangu Matondo, Fiona McLaughlin, and Eric Potsdam. Somerville, MA: Cascadilla Proceedings Project, pp. 141–150.

Kiss, Katalin É., ed. (1995). *Discourse configurational languages*. Oxford studies in comparative syntax. New York: Oxford University Press.

Koenig, Jean-Pierre and Karin Michelson (2015). "Invariance in argument realization: The case of Iroquoian". In: *Language* 91.1, pp. 1–47.

— (2019). "Extended agreement in Oneida (Iroquoian)". In: *Prominent internal possessors*. Ed. by András Bárány, Oliver Bond, and Irina Nikolaeva. Oxford: Oxford University Press, pp. 131–162.

Kratzer, Angelika (1996). "Severing the external argument from its verb". In: *Phrase Structure and the Lexicon*. Ed. by Johan Rooryck and Laurie Zaring. Dordrecht: Springer, pp. 109–137.

Lasersohn, Peter (1995). "Plurality, conjunction and events". In: Dordrecht: Springer. Chap. 13, pp. 238–266.

Lazore, Sister Dorothy Ann Oróte' Karihwénhawe' (1976a). "Tehosterihénhsere'". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., p. 72.

— (1976b). "Ahthén:no". In: *Kanien'kéha okara'shòn:'a*. Ed. by Marianne Williams. Albany: University of the State of New York, State Education Dept., p. 48.

Lidz, Jeffrey (2006). "The grammar of accusative case in Kannada". In: *Language* 82.1, pp. 1–23.

Little, Carol Rose (2020). "Mutual dependencies of nominal and clausal syntax in Ch'ol". PhD thesis. Ithaca, NY: Cornell University.

Lounsbury, Floyd (1949). "Iroquoian morphology". PhD thesis. New Haven, CT: Yale University.

— (1953). *Oneida verb morphology*. New Haven, CT: Yale University Press.

Lukaniec, Megan (2018). "The elaboration of verbal structure: Wendat (Huron) verb morphology". PhD thesis. University of California Santa Barbara.

Marantz, Alec (1997). "No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon". In: *University of Pennsylvania Working Papers in Linguistics* 4.2, pp. 201–225.

— (2008). "Phases and words". In: *Phases in the theory of grammar*. Ed. by Dong In. Seoul: Dong In, pp. 191–222.

Martin, Akwiratékha' (2023). *Tekawennahsonterónnion Kanien'kéha morphology*. Kahnawà:ke: Kanien'kehá:ka Onkwawén:na Raotitióhkwa Language and Cultural Center.

Massam, Diane (2001). "Pseudo noun incorporation in Niuean". In: *Natural Language and Linguistic Theory* 19, pp. 153–197.

Matthewson, Lisa (2004). "On the methodology of semantic fieldwork". In: *International Journal of American Linguistics* 70.4, pp. 369–415.

Mattissen, Johanna (2004). "A structural typology of polysynthesis". In: *Word* 55.2, pp. 189–216.

McDonald, Mary Onwá:ri Tekahawáhkwen (May 2017). "Base nouns". Slides created for teaching Kanien'kéha.

— (Oct. 2019). "Lesson 1: Nouns and noun classes". Slides created for Akwesasne Mohawk Board of Education.

— (2023). "Interviews". Kanien'kéha language consultation work with the author.

McPherson, Laura (2013). *A grammar of Tommo So*. Berlin: De Gruyter Mouton.

Merlan, Francesca (1985). "Split intransitivity: Functional oppositions in intransitive inflections". In: *Grammar inside and outside the clause: Some approaches to theory from the field*. Ed. by Johanna Nichols and Anthony C. Woodbury. Cambridge: Cambridge University Press, pp. 324–362.

Michelson, Karin (1988). *A comparative study of Lake-Iroquoian accent*. Dordrecht: Kluwer.

— (1991). "Possessor stranding in Oneida". In: *Linguistic Inquiry* 22, pp. 756–762.

— (2016). "Iroquoian languages". In: *Oxford Research Encyclopedia of Linguistics*.

— (2023). "Word classes in Iroquoian languages". In: *The Oxford Handbook of Word Classes*. Ed. by Eva van Lier. Oxford: Oxford University Press.

Michelson, Karin and Mercy Doxtator (2002). *An Oneida–English/English–Oneida dictionary*. Toronto: University of Toronto Press.

Mithun, Marianne (1984). "The evolution of noun incorporation". In: *Language* 60, pp. 847–893.

— (1988). "System-defining structural properties in polysynthetic languages". In: *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 41.4, pp. 442–452.

— (1991). "Active/agentive case marking and its motivations". In: *Language* 67.3, pp. 510–546.

— (2001). "Who shapes the record: the speaker and the linguist". In: *Linguistic fieldwork*. Ed. by Paul Newman and Martha Ratliff. Cambridge: Cambridge University Press, pp. 34–54.

— (2006). "Voice without subjects, objects or obliques: Manipulating argument structure in agent/patient systems". In: *Voice and grammatical relations*. Ed. by Tasaku Tsunoda, Yoshihiro Nishimitsu, and Taro Kageyama. Amsterdam: John Benjamins, pp. 195–216.

— (2009). "Iroquoian: Mohawk". In: *The Oxford Handbook of Compounding*. Ed. by Rochelle Lieber and Pavol Štekauer. Oxford: Oxford University Press, pp. 564–583.

— (2017). "The Iroquoian language family". In: *The Cambridge handbook of linguistic typology*. Ed. by Alexandra Y. Aikhenvald and R.M.W. Dixon. Cambridge Handbooks in Language and Linguistics. Cambridge: Cambridge University Press. Chap. 24, pp. 747–781.

— (2020). "Discourse particle position and information structure". In: *Information-structural perspectives on discourse particles*. Ed. by Pierre-Yves Modicom and Olivier Duplâtre. Studies in language comparison 213. Amsterdam: John Benjamins. Chap. 1, pp. 27–46.

Moseley, Christopher, ed. (2010). *Atlas of the world's languages in danger*. Third. UNESCO.

Myler, Neil (2016). *Building and interpreting possession sentences*. Cambridge, MA: MIT Press.

Ngonyani, Deo and Nancy Jumwa Ngowa (2016). "The productivity of the reversive extension in Standard Swahili". In: *Diversity in African languages*. Ed. by Doris L. Payne, Sara Pacchiarotti, and Mokaya Bosire. Berlin: Language Science Press, pp. 255–271.

Nie, Yining (2020). "Morphological causatives are Voice over Voice". In: *Word Structure* 13.1, pp. 102–126.

Oxford, Will (2019). "Inverse marking and Multiple Agree in Algonquin". In: *Natural Language and Linguistic Theory* 37, pp. 955–996.

Partee, Barbara H. (1987). "Noun phrase interpretation and type-shifting principles". In: *Studies in discourse representation theory and the theory of generalized quantifiers*. Ed. by Jeroen Groenendijk, Dick de Jongh, and Martin Stokhof. Dordrecht: Foris, pp. 115–144.

Piggott, Glyne (1989). "Argument structure and the morphology of the Ojibwa verb". In: *Theoretical perspectives on Native American langauges*. Ed. by Donna B. Gerdts and Karin Michelson. State University of New York Press, pp. 176–208.

Preminger, Omer (2009). "Breaking agreements: Distinguishing agreement and clitic-doubling by their failures". In: *Linguistic Inquiry* 40, pp. 619–666.

— (2014). *Agreement and its failures*. Cambridge, MA: MIT Press.

— (2019). "What the PCC tells us about "abstract" agreement, head movement, and locality". In: *Glossa* 4.1, p. 13.

Pylkkänen, Liina (2008). *Introducing arguments*. Cambridge, MA: MIT Press.

Renard, Martin (2023). *Inactive, active, and non-noun incorporation in Kanien'kéha: A categorization and excorporation analysis*. Ms., University of Toronto.

Richards, Marc D. (2015). "Defective Agree, case alternations, and the prominence of Person". In: *Scales and hierarchies*. Ed. by Ina Bornkessel-Schlesewsky, Andrej Malchukov, and Marc D. Richards. Berlin: De Gruyter Mouton, pp. 173–196.

Ritter, Elizabeth (1991). "Two functional categories in noun phrases: Evidence from Modern Hebrew". In: *Perspectives on phrase structure: Heads and licensing*. Ed. by Susan D. Rothstein. San Diego, CA: Academic Press, pp. 37–62.

Šereikaitė, Milena (2022). *Voice and Case: Lessons from nominalizations without passives*. Slides presented at the Princeton Symposium on Syntactic Theory.

Stacey, Kahtehrón:ni Iris (2016). "Ientsitewate'nikonhraié:ra'te tsi nonkwá:ti ne á:se tahatikonhsontóntie: We will turn our minds there once again, to the faces yet to come". MA thesis. Victoria, BC: University of Victoria.

Svenonius, Peter (2016). "Spans and words". In: *Morphological metatheory*. Ed. by Heidi Harley and Daniel Siddiqi. Amsterdam: John Benjamins, pp. 199–220.

— (2023). "The origin of words". Talk given at Morphology as Syntax 3, Montréal, QC.

Toosarvandani, Maziar (2023). "The interpretation and grammatical representation of animacy". Ms., University of California Santa Cruz.

Travis, Lisa (1984). *Parameters and effects of word order variation*. Doctoral dissertation, MIT. Cambridge, MA.

Travis, Lisa deMena (2010). *Inner aspect: The articulation of VP*. Dordrecht: Springer.

Tyler, Matthew (2021). "Two kinds of external possession in Mississippi Choctaw". In: *Syntax* 24.1, pp. 78–122.

Van Geenhoven, Veerle (1998). *Semantic incorporation and indefinite descriptions: Semantic and syntactic aspects of noun incorporation in West Greenlandic*. Stanford, CA: CSLI.

Van Geenhoven, Veerle (2004). "*For*-adverbials, frequentative aspect, and pluractionality". In: *Natural Language Semantics* 12, pp. 135–190.

Van Urk, Coppe (2015). "A uniform syntax for phrasal movement: A case study of Dinka Bor". PhD thesis. Cambridge, MA: MIT.

Von Humboldt, Wilhelm (1836). *Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluß auf die geistige Entwickelung des Menschengeschlechts*. Berlin: Königliche Akadamie der Wissenschaften.

Williams, Marianne, ed. (1976). *Kanien'kéha okara'shòn:'a*. Albany: University of the State of New York, State Education Dept.

Wiltschko, Martina (2006). "On 'ergativity' in Halkomelem Salish". In: *Ergativity*. Ed. by Alana Johns, Diane Massam, and Juvénal Ndayiragije. Dordrecht: Springer.

Woodbury, Hanni (1975). *Noun incorporation in Onondaga*. Doctoral dissertation, Yale University. New Haven, CT.

A   Alternating Stems

This is a list of verb stems that appear with extra material when there is no incorporated noun intended to for study by Kanien'kéha learners. Entries are intended to be read as follows: the piece of the verb that is **not** bracketed is the form of used with incorporated nouns. The full verb including the bracketed part is what is used when nothing is incorporated.

As an example, take the entry [*n*]*ohare* 'wash'. The piece not bracketed (*ohare*) is what is used with incorporated nouns. In (159) below, the noun *kà:sere* 'car' has been incorporated, so the verb appears as *ohare*.

(159)   Wahi'sereht**óhare**'se'.   'I washed his car./I washed the car for him.'

However, when a noun is not incorporated, the whole verb stem including the bracketed part is used. As an example, when no noun is incorporated in the question in (160), the verb root appears with the bracketed piece as *nohare*.

(160)   Oh nahò:ten Katsi'tsiahtónhtha' wa'e**nóhare**'?   'What did Katsi'tsiahtónhtha' wash?'

Verb stems derived via derivational morphology from those listed here also appear with the extra morphology of their "parent" stem when nothing is incorporated. The following list is not intended to be a list of all verb stems that appear with extra material when a noun is not incorporated. Previous discussion with advanced learners and teachers has suggested that a similar list has not been created, and therefore my aim is simply to provide a basic list of these terms that can be expanded upon by teachers as needed.

[*n*]*ohare*	'wash'
[*na'*]*nawen*	'be wet'
[*sta*]*then*	'be dry'
[*hswa*]*the'* (with duplicative *te-*)	'be bright'
[*ra'*]*nentak*	'be sticky'
[*ra*]*karer*	'for noise to sound'
[*hwa*]*tase*	'turn'

[*swa*]*'ek*	'strike'
[*hni*]*ot*	'erect, stand up'
[*a's*]*en'*	'fall'
[*iena*]*wa's*	'help s.o. with'

Additionally, the following verbs appear with the incorporated root *ia't* 'body' when their undergoer is a human or animal.

[*ia't*]*enha(w)*	'bring, take'
[*ia'ta*]*ta*	'bury (with *ia't*), put s.t. in (otherwise)'
[*ia'ta*]*iestahsi*	'pick out'
[*ia'ta*]*hnir*	'be strong, be hard'
[*ia't*]*atshenri*	'find'
[*ia't*]*uti*	'lose, throw'
[*ia'ta*]*h(e)r*	'be (laid out) on top of'
[*ia't*]*isak*	'miss, look for'
[*ia'ta*]*tshahniht*	'intimidate'
[*ia't*]*en'tonhn*	'follow around, follow behind'
[*ia'ta*]*nentak*	'be stuck to'
[*ia't*]*ohseronkw*	'pet, massage'
[*ia't*]*awen*	'happen to s.o.
[*ia'ta*]*hsteris*	'be funny'
[*ia'ta*]*tarihen*	'be warm'
[*ia't*]*ahton*	'be lost'
[*ia't*]*ita'*	'give s.o. a ride (with *ia't*), put into (otherwise)'
[*ia'ta*]*ka'wa*	'give out, release'

B   A how-to guide to Kanien'kéha possession

This is a how-to guide intended as a helpful tool for learners learning possession. It begins with in-depth writing about possession before providing a flow chart intended for quicker reference. I only cover nouns. Kinship terms in Kanien'kéha represent relationships and therefore do not act like possession.

Nouns in Kanien'kéha are separated into **alienable** and **inalienable** sets. *Alienable* nouns are nouns that can be separated from you. Often they can be bought and sold, given and taken, or chosen. Some examples are *kà:sere* 'car', *akià:tawi* 'shirt', and *kaia'tón:ni* 'doll'. On the other hand, *inalienable* nouns are inseparable. They cannot be sold or given freely. All inalienable nouns in Kanien'kéha are body parts, such as *okónhsa'* 'face', *okà:ra* 'eye', and *awen'tskwè:na* 'chest'. There are different ways to possess alienable and inalienable nouns.

Alienable nouns are possessed using the possessive prefixes. This is the only way to truly possess alienable nouns.

To possess an alienable noun, the steps are:

(a) remove the noun prefix that comes with the noun, and
(b) attach the possessive prefix matching the possessor.

As an example, 'her car' can be made by removing the noun prefix *ka-* from *kà:sere*, then (b) attaching the Her possessive prefix *ako-*, to make *akò:sere* 'her car'. The steps are illustrated in (161).

(161)   *kà:sere* ⟶ *-'sere* ⟶ *ako* + *'sere* ⟶ *akò:sere'* 'her car'

There is another way to *imply* possession of alienable nouns. An example is *Wahakhwistanénhsko'*. This example means 'He stole the money from me', describing a situation where money was taken from you. However, this sentence also *implies* that the money belonged to you, though this is not necessarily part of the meaning of the sentence.

The implied method of possessing alienable items involves incorporation and may only be used when the possessed item is the **undergoer** of the action. For example, this method could be used with the sentence 'I swept my house' because the possessed house undergoes the action of sweeping. However, it could not be used if the possessed item was the agent of the action. This means that it cannot be used with the sentence 'My knife cut the bread' because the possessed knife is doing the cutting.

To imply possession in this way, the steps are:
(a) incorporate the alienable item into the verb,
(b) add the benefactive (only sometimes; see below), then
(c) use the actor-to-possessor prefix.

As an example, let's make the sentence 'He tore my skirt.' Because the skirt is the undergoer, we can use the implied possession method. First, we make *o'wháhsa'* 'skirt' into its incorporating form, taking off the noun prefix and suffix.

(162)   *o'wháhsa'* ⟶ *-'whahs-*

Then we incorporate 'skirt' into the verb *-ratsion* 'tear'.

(163)   *-'whahs-* + *-ratsion-* ⟶ *'whahsaratsion*

Next, we add the benefactive suffix to the verb.

(164)   *-'whahsaratsion-* + *-'s* ⟶ *-'whahsaratsion's-*

Lastly, we use the He-to-Me prefix. After adding tense, we have the full verb!

(165)   *hake-* + *'whahsaratsion's* ⟶ *hake'whahsaratsion's* ⇒ *Wahake'whahsarátsion'se'* 'He tore my skirt'

An important thing to note is that this implies the skirt is mine, but does not require the skirt to be mine. It can also be used to describe a situation where he tore a skirt and his actions affected me

(either negatively or positively). Another example is *Wahi'serehtóhare'se'* which can either mean 'I washed his car' or 'I washed the car for him'. If possession is required, the possessive prefixes above must be used.

Another important thing is that step 2 (adding the benefactive) is not used for verbs that already have three participants, like *hninon* 'buy', which has a buyer, a seller, and the thing being bought. In cases like this, we simply do steps 1 and 3. For example, to make the sentence 'I bought her book', we do step 1, incorporating *kahiatónhsera'* 'book' into *hninon* 'buy'.

(166)   *-hiatonhser- + -hninon- ⟶ hiatonhserahninon*

Since *hninon* already has three participants, we ignore step 2, and go to step 3, and use the Me-to-Her prefix.

(167)   *khe- + -hiatonhserahninon- ⟶ -khehiatonhserahninon- ⟹ Wa'khehiatonhserahní:non'* 'I bought her book'

Another verb with three participants is *nenhskw* 'steal'.

Inalienable nouns can be possessed in multiple ways. First, an inalienable noun can be possessed with the possessor prefixes, but only if it is separated from you. For example, *okónhsa'* 'face' with the Me possessor prefix *ak-* creates *akkónhsa'* 'my mask'. A mask is a face that is separated from you. Other body parts with possessor prefixes refer to prosthetics or body parts severed from your body.

There are two ways to possess inalienable nouns that are attached to you.

One way to possess inalienable nouns is to:
    (a) remove the noun prefix and suffix,
    (b) attach the agent set prefix, and
    (c) attach a locative suffix.

As an example, let's build 'my knee'. First, we remove the noun prefix and suffix.

(168)   *okwítsha' ⟶ -kwitsh-*

Then we attach the I agent prefix.

(169)   *k- + -kwitsh- ⟶ kkwitsh-*

Finally, we add a locative suffix. Any will do, but the usual one is *-à:ke*.

(170)   *kkwitsh- + à:ke ⟶ kkwitshà:ke* 'my knee'

Because it has the locative ending, *kkwitshà:ke* can either mean 'my knee' or 'on my knee'.

The other way to possess inalienable nouns is incorporation. Similar to the incorporation of alienable items above, the inalienable item must be the **undergoer** of the action to be possessed like

this. Unlike the alienable item incorporation though, incorporation truly means possession for inalienable items.

The steps for possession by incorporation are the same as the steps for alienable items in the three-participant verbs above:
(a) incorporate the alienable item into the verb, and
(b) use the actor-to-possessor prefix.

Let's use 'He tapped her shoulder' as an example. First, incorporate *ohnénhsa'* 'shoulder' into *ia'k* 'tap, hit'.

(171)   *-hnenhs- + ia'k ⟶ hnenhsaia'k*

Then we use the him-to-her pronominal prefix.

(172)   *hshako + hnenhsaia'k ⟶ hshakohnenhsaia'k ⇒ Wahshakohnenhsáia'ke'* 'He tapped her shoulder'

Note that if the possessor of the inalienable item and the actor are the same, the semireflexive and agent prefix are prefixed instead of the actor-to-possessor prefix.

Below is a flow chart quick guide for how to possess nouns in Kanien'kéha.

What strategy should I use for possession?