Information Structure in Kanien'kéha*

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1 Introduction

Free or "discourse-configurational" word order is a common property of so-called "polysynthetic" languages (Fortescue et al. 2017, Baker 1996, Mithun 2015, 2020). Kanien'kéha, a Northern Iroquoian language, is an oft-cited example of a polysynthetic language, meaning that it is very morphologically complex with a high morpheme to word ratio (DeCaire 2023). It is also robustly pro-drop, meaning that arguments can be expressed through morphology on the verb and independent nominals are frequently dropped. This leads to relatively complex verbs that can express meanings which would require a full sentence in English. However, when nominals are overt, they can appear in any order. Baker (1996) provides the following paradigm to show that all six logically possible word orders are grammatically acceptable in Kanien'kéha:[1]

(1) a. **S V O**
Sak ranòn:we's akoatiá'tawi.
Sak ra-nonhwe'-s ako-atia'tawi
Sak MSGA-like-HAB FI.P-dress

b. **V S O**
Ranòn:we's Sak akoatiá'tawi.
ra-nonhwe'-s Sak ako-atia'tawi
MSGA-like-HAB Sak FI.P-dress

Niawenhkó:::wa to Mary Onwá:ri Tekahawáhkwen McDonald for taking the time to share her language and wisdom with me. *Niawenhkó:wa ó:ni* Akwiratékha Martin and Kanontienénhtha' Brass for sharing their extensive knowledge of Kanien'kéha, and Wíshe Mittelstaedt for being a fantastic Kanien'kéha language teacher. I am endlessly grateful to Jessica Coon for her supervision and patience and for her many helpful comments on this work. Special thanks to Simon LiVolsi for his help with the prosodic data in this paper. Additional thanks to Heather Goad, Tahohtharátye Brant, Chase Boles, Max Blackburn, Terrance Gatchalian, Austin Kraft, Katya Morgunova, Willie Myers, and Martin Renard, as well as the members of the *Roti'nikonhrowá:nens* research group for comments on previous versions of this work. All remaining errors are my own.

[1] Glosses follow standard Leipzig conventions with the following additions: A = agent, C = complementizer, CONT = continuative, CONTR = contrastive, DIM = diminuitive, DIST = distributive, DUP = duplicative, EMPH = emphatic, EPEN = epenthetic vowel, FACT = factual, FI = feminine indefinite, FOR.PST = former past, FZ = feminine zoic, HAB = habitual, INCH = inchoative, INSTR = instrumental, JR = joiner, NE = ne, NSF = noun suffix, OPT = optative, P = patient, PART = partitive, PRO = independent pronoun, PUNC = punctual, PURP = purposive, Q = question particle, REM.PST = remote past, REP = repetitive, REV = reversative, SRFL = semireflexive, STAT = stative, TRANS = translocative. Orthography and glosses from original sources have been modified for consistency and to bring them in line with modern orthographic norms (Lazore 1993).

Examples are presented in a four-line gloss, with the initial line written in the standard orthography, the second line representing morpheme breaks with underlying representations where relevant, the third line representing morpheme glosses, and the last line being a free translation into English. Stress and length are assigned by regular word-level phonological proceses (Michelson 1988), and are thus written only on the first line.

c. **S** **O** **V**
Sak akoatiá'tawi ranòn:we's.
Sak ako-atia'tawi ra-nonhwe'-s
Sak FI.P-dress MSGA-like-HAB

d. **V** **O** **S**
Ranòn:we's akoatiá'tawi ne Sak.
ra-nonhwe'-s ako-atia'tawi ne Sak
MSGA-like-HAB FI.P-dress NE Sak

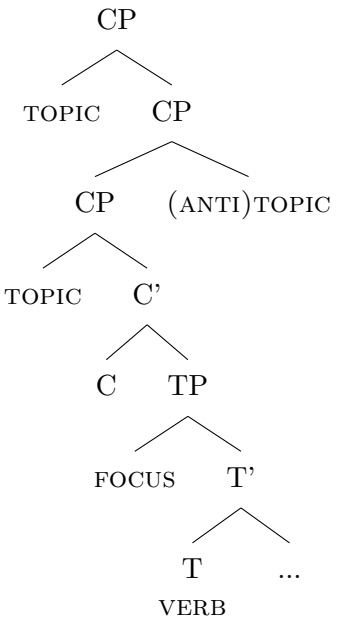
e. **O** **V** **S**
Akoatiá'tawi ranòn:we's ne Sak.
ako-atia'tawi ra-nonhwe'-s ne Sak
FI.P-dress MSGA-like-HAB NE Sak

f. **O** **S** **V**
Akoatiá'tawi Sak ranòn:we's.
ako-atia'tawi Sak ra-nonhwe'-s
FI.P-dress Sak MSGA-like-HAB
'Sak likes her dress.' (Baker 1996:10, K.)

Some work (e.g. Mithun 2015, Mithun 2020) has observed that word order is governed by "newsworthiness," arguing that when a constituent is considered newsworthy by the speaker, that will be what comes first in the sentence. DeCaire et al. (2017) have refined this claim to propose that some of this apparently "free" word order can be explained through information structural syntactic constraints. Specifically, they propose that there is a left-periphery focus position in Spec,CP for Kanien'kéha, and any constituent can appear in this initial position if it is focused.

In this thesis, I build on and refine DeCaire et al. (2017)'s proposal even further, arguing that word order in Kanien'kéha is indeed governed by information structural factors. Specifically, I will propose that there is a left-periphery focus position, but that this is not the only aspect of information structure that can have an effect on word order; topics also play a role. In refining topic and focus positions in Kanien'kéha, I propose that foci are located not in Spec,CP but in Spec,TP, and that topics may occupy Spec,CP. I argue that the verb moves to T in Kanien'kéha, resulting in a base word order of VSO when nothing is topicalized or focused. Finally, constituents can also be right-dislocated in Kanien'kéha, realized as a construction traditionally called 'antitopics' in Iroquoian literature (Chafe 1976, Mithun 2020), and preliminary prosodic evidence indicates that some topics can also be left-dislocated. This gives rise to the following structure for topics and foci in Kanien'kéha:

(2)



Note that this tree, with dedicated preverbal topic and focus positions as well as the possibility of high-adjoined topics and "antitopics", successfully derives each of the six orders that are grammatical in Kanien'kéha; this will be illuminated further in Section 3. Importantly, I argue that overt nominals in Kanien'kéha are generated in argument positions and can then be moved to clause-internal topic and focus positions. This goes against Baker (1996)'s well-known claim that, in polysynthetic languages, all overt nouns are high, freely-ordered clausal adjuncts that are co-indexed with null *pro*'s in argument positions. I acknowledge the possibility that *some* nouns can be left- and right-dislocated and adjoined to CP, but this is not true of most subjects and objects, which begin in argument positions and can be moved to dedicated topic and focus positions in Spec,CP and Spec,TP. Ultimately, I argue that there is no need to appeal to a macroparameter like Baker (1996)'s Polysynthesis Parameter in order to account for the free word order patterns in Kanien'kéha.

The rest of this work is organized as follows. Section 2 provides some context for the Kanien'kéha language as a whole as well as the methodology used in collecting data for this paper. Section 3 gives a more theoretical background, diving into some of Kanien'kéha's most well-known linguistic properties and giving an overview of previous work and theories, as well as a more in-depth look at my proposal. Section 4 explores some of the verbal syntax in Kanien'kéha and proposes that the language has a syntactic underlying order of VSO based on data from morphological word-building. Section 5 delves into the Spec,TP focus position in Kanien'kéha, looking at evidence for different types of focus and showing that, no matter the type, the focused element ends up in the same place. Section 6 examines topics in Kanien'kéha and motivates a position in Spec,CP that topics move to, and explores the potential of dislocating topics. Section 7 investigates the prosody of topic and focus constructions, showing that they are prosodically distinct from neutral contexts and distinct from each other. Finally, Section 8 concludes with a summary and some potential avenues for future research, and Appendix A provides a shorter summary of word order patterns in Kanien'kéha, intended as a more accessible entry point for second-language learners.

2 Background

2.1 Kanien'kéha language context

Kanien'kéha is a Northern Iroquoian language spoken by the Kanien'kehá:ka people in eight communities throughout eastern Canada and upstate New York (DeCaire 2023). Kanien'kéha belongs to the Five Nations subbranch of Northern Iroquoian, which also includes Onödowá'ga:' (Seneca), Onuda'gegá' (Onondaga), Onʌyote'a:ká: (Oneida) and Gayogohó:no' (Cayuga). Kanien'kéha has the highest vitality out of these five languages, although it is considered 'definitely endangered' by UNESCO's *Atlas of the world's languages in danger* (Moseley 2010), and Stacey (2016) also describes it as 'at risk' according to Nettle & Romaine (2002)'s definition, and 'threatened' according to Fishman (1991)'s Graded Intergenerational Disruption Scale (GIDS). There are a little over 600 first-language speakers, the majority of whom are elders, and about 1,000 more second-language learners (DeCaire 2023).

The current endangered status of the language is largely due to violent colonial practices such as residential schools, which led to a steep decline in intergenerational transmission (Stacey 2016). However, since the 1970s efforts have been made throughout the communities to begin revitalizing Kanien'kéha, beginning with immersion schools for children and eventually expanding to adult immersion programs in the 1990s (Stacey 2016). Stacey (2016) and DeCaire (2023) both note that the success of elementary immersion has been variable, as in many cases children will not use the language if they are not also exposed to it in the home environment. For this reason, there have been strong arguments for the importance of adult immersion programs in recent years so that intergenerational transfer might be reestablished in the home (DeCaire 2023, Brant 2023, Stacey 2024).

There are three dialects of Kanien'kéha: Western, Central, and Eastern, which primarily developed from different experiences after communities moved away from their homelands in what is today New York State (DeCaire 2023). This paper primarily focuses on the Central, or Ahkwesáhsne, dialect.

2.2 Linguistic properties

Kanien'kéha has been described as "polysynthetic" by many previous scholars (Baker 1996, Mithun 1984) as it is head-marking and displays frequent and robust noun incorporation, both taken to be traditional hallmarks of polysynthesis (Fortescue et al. 2017) (see Section 3.1 for further discussion of the concept of polysynthesis). Kanien'kéha is also robustly *pro*-drop; both of the principle arguments of a verb can be expressed through agreement morphology in the form of what are called "pronominal prefixes" in the Iroquoian literature. It also makes use of productive noun incorporation; certain verbs allow their themes to be incorporated into the verbal complex (see e.g. Boles 2024, Renard 2023, and DeCaire et al. 2017). Pro-drop, high morphological complexity and noun incorporation are all displayed in the example below:

(3) Tetiate'serehtahnhontérha' wahshakoia'taniión:ten'.
Te-ki-ate-'sere-ht-ahnhonter-ha' wa-hshako-ia't-aniiont-en'
DUP-FZDUA-SRFL-car-NMLZ-adjust-HAB FACT-MSG>3PL-body-hang.on.hook-PUNC
'He hitched them together on an adjustable wagon.' (Jacobs Jr. 1976, K.)

There are three parts of speech in Kanien'kéha: nouns, verbs, and particles (Michelson 2023). Particles are generally short, uninflected words and cover a range of discourse functions which are not especially well-understood. Of particular relevance to this paper will be the particle *ne* (which

appeared before certain nominals in (1) above). This particle has received varying descriptions in the literature, including as a determiner, an identifiabilty marker, a nominalizer, and a topic marker (Chafe 1994, Mithun 2015, Woodbury 2017, Henhawk & Whitman 2023). *Ne* can appear before nouns, verbs, and particles, and due to the difficulty of determining its function, it is typically glossed as simply NE. A full analysis of *ne* is outside the scope of this paper, but Sections 5 and 6 will take a closer look at *ne*'s role in information structure.

There are relatively few noun roots in the language; many 'nouns' are fully inflected verbs which serve a referential function (Michelson 2023). As alluded to previously, nouns can be incorporated into the verb stem, appearing directly before the verb root; in order to incorporate, they must be the internal argument (Baker 1988, 1996). Nominalized verbs can also be incorporated, with the addition of a nominalizer suffix (Bonvillain 1973). DeCaire et al. (2017) claim that incorporation is default where it is possible for it to occur; it is considered "baby talk" among some speakers if a noun is not incorporated where it could be. However, "excorporation," defined by DeCaire et al. (2017) as the occurrence of a free-standing noun that is able to incorporate, can occur under certain information-structural conditions (see Section 5.4 for more details). This is shown in the examples in (4):

(4) a. **Incorporation:**
Wa'kenaktahní:non'.
wa'-ke-nakt-a-hninon-'
FACT-1SGA-bed-JR-buy-PUNC
'I bought the/a bed.'

b. **Excorporation:**
Wa'khní:non' ne kanákta'.
wa'-k-hninon-' ne ka-nakt-a'
FACT-1SGA-buy-PUNC NE N.A-bed-NSF
'I bought the/a bed.' (DeCaire et al. 2017:1-2)

When nouns do occur outside the verbal complex, as in (4b), they consist of minimally a neuter nominal prefix and a noun root, and they may also contain a noun suffix (Bonvillain 1973). In (4b), this is the neuter agent prefix *ka-* and the noun suffix *-a'*.

As (3) shows, verbs in Kanien'kéha can be quite long with many morphological components. Michelson (2023) provides the following template for the morphemes of the verb:

(5) *Verb template (adapted from Michelson 2023)*

prepronominal prefixes	pronominal prefix	reflexive/ semi-reflexive	incorporated noun	verb root	derivational suffixes	aspectual suffixes	tense

What are labeled "pre-pronominal prefixes" can express negation, direction, amount, modality, and repetition (Mithun 2017).

Pronominal prefixes indicate the core arguments of the verb (Mithun 1991). These express the person, number, and gender features of the participants. There are three sets of pronominal prefixes: agent (also called subjective), patient (also called objective), and transitive. Transitive prefixes mark both arguments in a transitive sentence, and many are portmanteaux, although some forms can be separated out into the two arguments that they refer to, and the agent always precedes

the patient in those cases (Bonvillain 1973, Mithun 2020). Intransitive verbs use either an agent prefix or a patient prefix; in this sense, Kanien'kéha displays split-S agreement (Mithun 1991). The choice of using an agent or patient prefix is dependent on the verb; agent prefixes generally mark agents of volitional events while patient prefixes are generally used for non-volitional states, but there are exceptions and for many verbs the prefix choice must be lexically specified (Baker 1996, Mithun 1991). In terms of person, number, and gender distinctions, pronominal prefixes distinguish first, second, and third persons, as well as clusivity for first persons in the agent set. They also distinguish singular, dual, and plural numbers.

Finally, there are four genders: masculine, feminine indefinite, feminine zoic, and neuter. The masculine prefixes refer to male individuals and groups including one or more males. The feminine indefinite prefixes refer to singular females or a singular person whose gender is unknown. The feminine zoic can also refer to singular females, as well as dual and plural female groups, but it can also be used to refer to animals; the use of this prefix has complicated social implications (Bonvillain 1973). Finally, all inanimate nouns are neuter. The feminine zoic prefixes are mostly syncretic with neuters, but there are some exceptions (see Baker 1996, Koenig & Michelson 2015 and Coon 2025).

In addition to the pronominal prefixes which are obligatory on every verb, Kanien'kéha also has independent pronouns. These are used to express emphasis of a pronominal subject or object (Deering & Delisle 1976) or when pro-drop is impossible (e.g. to resolve ambiguity), and therefore often appear under information structural conditions such as focus. Independent pronouns will be discussed further in Section 5.1.

After the pronominal prefixes, some verbs can include a reflexive, "semireflexive" (or middle), or reciprocal (Michelson 2023). Next is an optional incorporated noun root followed by an obligatory verb root. The verb root may then be followed by a number of derivational suffixes which can express meanings such as reversal, causation, and distribution, among others.

Every verb contains an obligatory aspectual suffix. There are three main aspectual suffixes: the habitual, the punctual, and the stative, which roughly correspond to the imperfective, the perfective, and the perfect. These may then be followed by what Michelson (2023) calls "post-aspectual suffixes" (labeled here as "tense") such as the past tense (see Gatchalian (2024)) or the progressive.

2.3 Methodology

The data in this paper primarily comes from my own fieldwork, although I also draw on published material, both academic and a collection of narratives written in Kanien'kéha called *Kanien'kéha Okara'shón:'a* (Williams 1976). This collection contains 33 stories written by 10 different speakers; speaker names will be cited in any examples used from this book. I conducted fieldwork sessions with Mary Onwá:ri 'Wári' Tekahawáhkwen McDonald, a first language speaker and community linguist from Ahkwesáhsne. Elicitation sessions took place either at the Linguistics Department at McGill University, at Wári's home in Ahkwesáhsne, or online via Zoom. Data from these sessions is cited as McDonald 2024 or McDonald 2025. I also conducted a handful of sessions with Akwiratékha Martin, an advanced second-language speaker and community expert from Kahnawà:ke; data from Akwiratékha is cited as Martin 2024. Because most of my data comes from Wári, any unmarked examples are in the Ahkwesáhsne dialect; examples from other dialects will be noted as such (data in the Kahnawà:ke or Kanehsatà:ke dialect is marked with a K.). Elicitation tasks were largely based on methodology described in existing resources on linguistic fieldwork such as Payne (1997), Matthewson (2004) and Bowern (2008). This work was conducted under the guidelines laid out in the *Directive for ethical and collaborative Kanien'kéha language research* document and supported by

the SSHRC Insight Grant (2023-2028) "The grammar of hierarchy effects". Elicitations mostly took the form of translations and grammaticality judgements, for which context was always provided; contexts will be included in the examples in this paper. In order to investigate prosody, I also asked Wári to read selections from some of the stories in *Kanien'kéha Okara'shón:'a* or asked her to record some of her own stories.

3 Overview of proposal and consequences

This section provides some more theoretical background, first giving an overview of previous research on Kanien'kéha and how the language has become a "poster child" for other polysynthetic languages before diving into my proposal and how it deviates from some of this work.

3.1 Polysynthesis

The term "polysynthetic" to describe languages goes back to the early 19th century; the term was first coined by Peter Duponceau, who used it to describe the structure of North American Indigenous languages, specifically using it to refer to the fact that a great number of ideas can be expressed in relatively few words (Duponceau 1819). Researchers have continued to use this term for the past two centuries, but as Haspelmath (2018) and Crippen (2019) point out, the concept has not gained a more concrete definition since Duponceau coined it originally.

Although a clear definition of polysynthesis does not appear to exist, there are a handful of properties that characterize most languages that have been described as polysynthetic. For this reason, Fortescue et al. (2017) propose a "cluster of features" that could encompass the term, such as bound core pronominals (arguments indexed on the verb), noun incorporation, heavy verbalizing affixes, verb and adverb incorporation, lexical affixes, heavy adverbial affixes, classificatory affixes, and applicatives.

However, only the first property (bound pronominals) is actually shared across all of the languages described in Fortescue et al. (2017). They therefore attempt to single out two properties that are shared across polysynthetic languages: they must be holophrastic (i.e. allow "subject" and "object" categories to be expressed morphologically on the verb) and they must allow at least one "lexically heavy morpheme" to be contained within the verb (i.e. noun incorporation). As Haspelmath (2018) points out, however, it can be difficult to determine what counts as "lexically heavy." He ultimately argues that linguists would be better off abandoning the term "polysynthesis" altogether, as it describes little more than a collection of surface features.

Baker (1996) argues for a *macroparameter*, proposing that what makes polysynthetic languages different from non-polysynthetic ones is not a collection of small differences but rather one big difference that can be captured by a parameter. He calls this the *Polysynthesis Parameter*, defined informally as a requirement that every argument of a head element must be related to a morpheme in the word containing that head. More concretely, he argues for the Morphological Visibility Condition (or MVC), defined in (6):

(6) Morphological Visibility Condition (MVC, Baker 1996): A phrase X is visible for theta role assignment from a head Y only if it is coindexed with a morpheme in the word containing Y via:

   a. an agreement relationship, or

   b. a movement relationship (i.e. incorporation)

Several properties follow from this definition, which is narrower than Fortescue et al. (2017)'s characterization, including syntactic noun incorporation, obligatory object agreement, free pro-drop, free word order, no NP reflexives, no true quantifiers, obligatory *wh*-movement, no true determiners, and no infinitives (Barrie & Mathieu 2019). Another consequence of the Polysynthesis Parameter is that, given that pronominal agreement markers and incorporated nouns index the null true arguments of the verb, all overt nominals must be adjoined (resulting in freedom of word order, since adjuncts can be arranged in any order). Baker (1996) argues that there are null *pro*s in

argument positions, which can only be theta-licensed if there is an agreement marker on the verb. It is these null *pro*s that get assigned case, and thus there is no case assignment available for overt nominals. This means that Baker would not predict any structural differences among these overt high-adjoined nominals. However, as the remainder of this paper will show, there are clear syntactic differences between overt nominals in different positions in Kanien'kéha; all nominals cannot be adjoined as Baker argues.

Many authors have also argued that Baker (1996)'s parameter does not accurately encompass all languages which have been called "polysynthetic," since some of the predicted properties listed above do not appear in those languages (see for example Kaiser 1996 on Ainu and MacSwan 1998 on Nahuatl). I am also not the first to argue that the Polysynthesis Parameter does not accurately reflect the syntax of Kanien'kéha specifically; see for example Coon (2025) on agreement and Boles (2024) on noun incorporation.

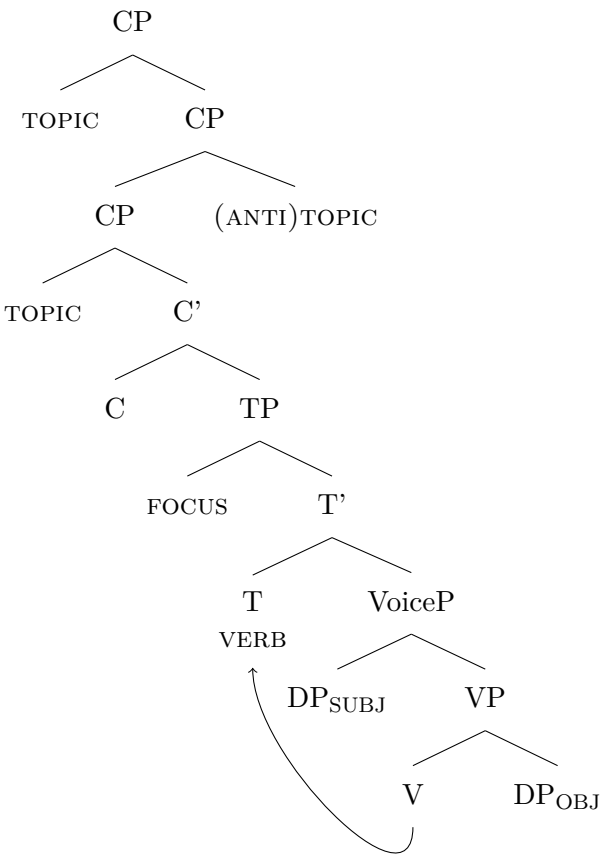
The remainder of this paper will specifically examine information structure in Kanien'kéha in order to argue that these patterns in word order can be accounted for by drawing on standard cross-linguistic assumptions about topic and focus, without the need for a macroparameter requiring that all overt nominals are adjuncts. I argue further that these aspects of information structure in fact cannot accurately be captured by Baker's theory, as the argument that all overt nouns are adjuncts cannot explain the structural differences between topics and foci in the language. The following section fleshes out my proposal in more detail.

3.2 Proposal

Contra Baker (1996), I propose that it is not the case that overt (non-incorporated) nominals in Kanien'kéha are freely adjoined, but rather belong in dedicated syntactic positions. I will argue that the basic word order in Kanien'kéha is VSO, with the subject and object remaining low in the clause while the verb moves to T, where it remains. I will argue further that there are two higher positions in the clause that constituents can move to in Kanien'kéha: one for focus and a higher one for topic. I also acknowledge the possibility that some nominals in Kanien'kéha *can* be adjoined high in the clause, in the form of left-dislocated external topics and right-dislocated antitopics. I conclude that any time a constituent appears before the verb in Kanien'kéha, it must be either topicalized or focused.

I adopt the proposal in DeCaire et al. (2017) that there is a left-periphery focus position in Kanien'kéha. However, my account differs from theirs in two respects: rather than the focus position being in Spec,CP, I suggest that it is in fact in Spec,TP. I also propose that there is more than one information-structural position before the verb; as Section 6 will show, topicalization (through movement as well as left- and right-dislocation) is also a prevalent strategy for managing discourse in Kanien'kéha, and topics come before foci when both are present in one sentence. This is shown in the following more detailed structure:

(7)



Topics in Kanien'kéha are consistently initial and always appear before focused elements, indicating that they belong in a higher projection. Data from island tests will show that at least some topics are clause-internal, not base generated high adjoined to the clause, motivating their position in Spec,CP (however, prosodic data points to the possibility of some topics being left-dislocated). Focus belonging in Spec,TP follows from subjects remaining in-situ in Kanien'kéha; there is nothing to motivate subject movement to Spec,TP, and therefore this movement only occurs when something is focused. The verb raising to T in Kanien'kéha is motivated in Section 4 based on word-building evidence, as well as on recent work such as Gatchalian (2025) which argues that T^0 is always present in the language, even if it is null. And finally, there is some evidence that topics can also be right-dislocated, represented by the (ANTI)TOPIC node in (7).

Note that this tree successfully derives all six logically possible word orders. The fact that VSO is the base order is derived from the verb moving up to T, and the subject and object remaining in-situ in Spec,VoiceP and in the complement of the verb, respectively. SVO and OVS can both be derived by topicalizing or focusing the subject or the object. SOV and OSV happen via topicalization and focusing of both the subject and the object (for SOV, the subject is the topic and the object is the focus, while for OSV, the object is the topic and the subject is the focus). Finally, VOS can be derived by postposing the subject, resulting in a right-dislocated antitopic.

3.3 Implications

As alluded to previously, this proposal has implications for the syntax of Kanien'kéha and polysynthetic languages in general. I argue that there is no need to appeal to a macroparameter in order

to account for information-structural properties of Kanien'kéha, and in fact Baker (1996)'s analysis cannot accurately describe these patterns. I therefore agree with the intuition in Haspelmath 2018 that there is no need to use the term "polysynthesis" to describe a unified collection of languages. Rather, the surface-level differences between languages like Kanien'kéha and languages like English can be best explained by the two differing in a number of small ways, rather than in one big way as Baker (1996) claims.

This proposal also has potential implications for teachers and learners of Kanien'kéha, who may be interested in learning more about the flow of discourse in the language and how factors such as topic and focus can affect this.

4 Basic word order

Most languages have a default ordering of subject, object, and verb in transitive clauses. This is often called a "basic word order," with SOV being the most common cross-linguistically, followed by SVO, VSO, VOS, OVS and OSV. However, there are also several languages that are described as lacking a dominant word order (Dryer 2020).

Kanien'kéha is one such language. A variety of the factors described in Section 2.2 contribute to the fact that basic word order is not immediately discernible in Kanien'kéha, in contrast to English, where SVO is clearly default and other orders are much less common. Because Kanien'kéha is robustly *pro*-drop, multiple overt arguments in one sentence are very rare once they have been introduced into the discourse, since every verb obligatorily contains a pronominal prefix referencing the core arguments. Additionally, the prevalence of noun incorporation means that themes are even less likely than agents to be realized as overt nouns, since speakers generally prefer to incorporate if neither the object or the verb are focused (DeCaire et al. 2017). Mithun (1991, 2020) also notes that incorporation can provide a resource for managing the flow of information; a common construction in Kanien'kéha discourse involves new referents being introduced into a discussion with an independent noun or a noun stem incorporated into a light verb, and once established they may then be carried on through the discussion with an incorporated noun. Again, this makes it even more rare for two overt arguments to appear in one sentence; as Mithun (2020) also notes, in a 1000-clause sample of conversation, there were only 265 lexical arguments, and only 6 of those clauses contained two (non-incorporated) lexical arguments.

4.1 Examining word order in narratives

New insights from narratives may help shed some light on this issue. In order to investigate how common each of the six word orders are in the language, I looked at the stories in the book *Kanien'kéha Okara'shón:'a* (Williams 1976). This book is a collection of narratives written by first-language speakers, and there are a total of 30 stories told by 10 different speakers. After recording the basic word order in each sentence, I found that out of 548 total sentences, only 67 (12.23%) were transitive sentences that contained an overt (i.e. non-incorporated) subject and object.[2] The distribution of these sentences is shown in the graph in Figure 1:[3]

[2] Note that this is a much higher percentage than the one described by Mithun (2020) from her 1000-clause sample. This could be a result of the fact that her data came from natural conversation rather than narratives; perhaps overt arguments are more common in narratives, where there are multiple different characters that may need to be referred to at once.

[3] A similar study was conducted by Hsu & Frey (2024), who looked at word order and information structure in Cherokee (Southern Iroquoian) and found that thematic roles of nominal constituents also contribute to differences in word order. The data from these Kanien'kéha stories might therefore be further elucidated by an examination of thematic roles, as opposed to just 'subject' and 'object' classifications.

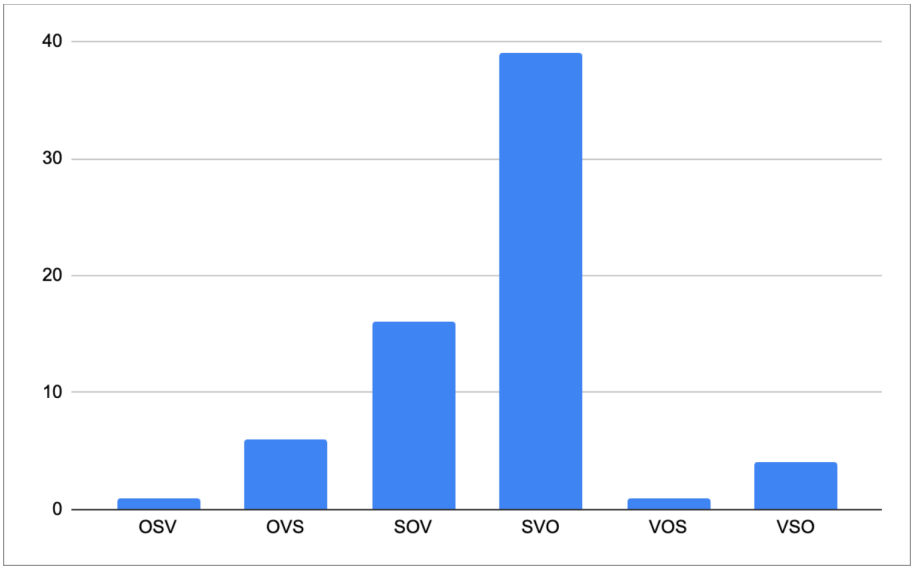


Figure 1: Transitive Word Order Distribution

As the graph shows, SVO order has a clear dominance, with 39 sentences (58.21%) displaying this order, but each of the six orders were attested at least once. Examples of each of these orders are given below:

(8) a.

			O	**S**
Tsi	wa'órhen'ne'	akwé	raona'tóhsera'	óniehte'
tsi	wa'-io-rhen-'n-e'	akwe	raon-a'tohser-a'	o-nieht-e'
C	FACT-N.P-day-INCH-PUNC	all	MPL.POSS-tent-NSF	N.P-snow-NSF

V
tioterhó:ron...
t-io-te-rhor-on
CIS-N.P-SRFL-cover-STAT
'The next morning, snow completely covered their tent...' (Kaieríthon 1976c, K.)

b.

						O
Tóhka'	niiohserà:ke	tsi	náhe'	sha'té:kon	nikón:ti	rabahbót
tohka'	ni-io-hser-a'ke	tsi	nahe	sha'tekon	ni-konti	rabahbot
several	PART-N.P-year-LOC	C	ago	eight	PART-FZPLA	bullheads

V		**S**
wahentsiahní:non'	ki	rake'níha.
wa-ra-entsi-a-hninon-'	ki	rake-'niha
FACT-MSGA-fish-JR-buy-PUNC	this	MSG>1SG-father

'Several years ago my father bought eight small bullheads.' (Kariwénhawe' 1976b, K.)

c.

	S	**O**	**V**
Kí:ken	iakoneniói**a**'ks	rahsnonhsá:ke	wahonitskerón:ti'
kiken	iako-neni-oia'k-s	ra-hsnonhs-ake	wa-ro-an-itsker-onti-'
this	FI.P-stone-throw-HAB	MSGA-hand-LOC	FACT-MSGP-SRFL-spit-throw-PUNC

tánon'	kentstenhrá:ke	waharánie'.
tanon'	kentstenhr-ake	wa-ra-ranie-'
and	rock-LOC	FACT-MSGA-rub-PUNC

'The little man spit on his hands and rubbed the rock with them.'

(Kaieríthon 1976a, K.)

d.

			S	**V**	
Ó:nen	iá:ken'	ki	raksà:'a	iahoia'ténhawe'	ne
Onen	iaken'	ki	ra-ksa-'a	i-a-ro-ia't-enhaw-e'	ne
now	so.they.say	this	MSGA-child-DIM	TRANS-FACT-MSG>MSG-body-bring-PUNC	NE

O

rohsótha.
ro-hsotha
MSG>MSG-grandparent

'So the boy took the old man into the woods.' (Jacobs 1976, K.)

e.

Tsi	ó:nen	ne	tekeniksà:'a	ionsákenewe'
Tsi	onen	ne	te-keni-ksa-'a	i-ons-a-ken-ew-e'
C	now	NE	DUP-FZDUA-child-DIM	TRANS-REP-FACT-FZDUA-arrive-PUNC

tánon'	satiathró:ri'		nahò:ten'	wa'tiatkáhtho',
tanon'	s-a-ti-at-hrori-'		nahoten'	wa'-ki-atkahtho-'
and	REP-FACT-FZDUA-SRFL-tell-PUNC		what	FACT-FZDUA-see-PUNC

V		**O**	**S**
wahshakohró:ri'	ne'	neksà:'a	ronwa'níha,
wa-hshako-hrori-'	ne'	ne-ie-ksa-'a	ronwa-'niha
FACT-MSG>3PL-tell-PUNC	NE'	NE-FIA-child-DIM	FI>MSG-father

'Later, when they had told what had happened, their father told the girls...'

(Phillips 1976a, K.)

f.

			V
O:nen	thó:ha	shahia'nikonhrò:kten'	waháttoke'
onen	thoha	sh-a-ri-a-'nikonhr-o'kt-en-'	wa-ra-attok-e'
now	almost	COIN-FACT-MDUA-SRFL-mind-end-BEN?-PUNC	FACT-MSGA-notice-PUNC

S

ne	thakowá:nen	ken'k	niió:re'	ne	karhá:kon
ne	t-ra-kowan-en	ken'k	niiore'	ne	karh-akon
NE	DUP-MSGA-big-STAT	a.bit	so.is.it.far	NE	forest-LOC

O

tkaháhserote'...
t-ka-ha-hser-ot-e'
CIS-N.A-house?-NMLZ-stand-STAT

'Just as they were about to give up, the older boy saw a house in the forest...'
(Phillips 1976c, K.)

Intransitive sentences, on the other hand, have a much more even distribution. SV is the most common, but by a much smaller margin than SVO, and is followed closely by VS. Out of 458 total intransitive sentences,[4], 158 (34.50%) were SV, 120 (26.20%) were VS, 107 (23.36%) were VO, and 73 (15.94%) were OV. This distribution is shown in the graph in Figure 2.

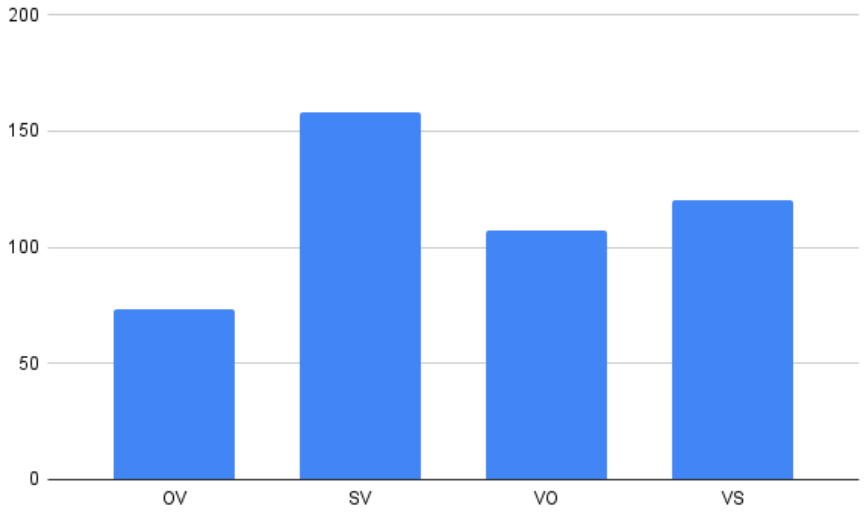


Figure 2: Intransitive Word Order Distribution

An example of each intransitive order from the stories is given below.

[4]Excluding those that had just a verb, or a verb and a locative.

(9) a.

			O	**V**
Kiótkon	iá:ken	kí:ken	rón:kwe	énhtsken’
kiotkon	iaken	kiken	ronkwe	en-hts-ken-’
always	they.say	this	man	FUT-2SG>MSG-see-PUNC

ro’thahitáhkhe’.
ro-’t-hah-itahke-’
MSGP-SRFL-road-be.in.something.moving-STAT
‘You can always see a fellow walking along the road.’ (Kariwénhawe’ 1976c, K.)

b.

				S		
Tá:we’	ne	ohnísera’,		í:’i	ká:ti’	ó:ni’
T-a-w-e-’	ne	o-hniser-a’		i’i	kati’	oni’
CIS-FACT-N.A-be.here-PUNC	ne	N.P-day-NSF		1PRO	then	also

V
entionkwaién:ta’ne’.
en-t-ionkwa-ient-a-’n-e’
FUT-DUP-1PLP-lay-JR-INCH-PUNC
‘For someday, we too shall get old.’ (Jacobs 1976)

c.

			V		**O**	
Iáh	ne	wén:ton	teshonwaia’tatshénrion	ne	raksá:’a.	
iah	ne	wenton	te-s-honwa-ia’t-atshenri-on	ne	ra-ks-a’a	
not	NE	ever	NEG-REP-MPL>MSG-body-find-STAT	the	MSGA-child-DIM	

‘The boy was never seen again.’ (Phillips 1976d, K.)

d.

V		**S**
Roti’nikonhró:ris	ne	rotinonhwaktanión:ni.
roti-’nikonhr-ori-s	ne	roti-nonhwakt-ani-onni
MPLP-mind-entertain-HAB	NE	MPLP-sick-BEN-make.STAT

‘The patients enjoy it.’ (Montour 1976, K.)

Subject-first word order is clearly the most common in both transitive and intransitive sentences (although by a smaller margin in intransitive sentences). While this could be a result of heavy English influence on Kanien’kéha speech (Wíshe Mittelstaedt, p.c.), I will suggest that this result is likely due to the tendency of subjects to either be topicalized or focused in the language, and that the underlying syntactic word order is in fact VSO.

I am not the first to suggest that Kanien’kéha has a verb-initial basic word order. DeCaire et al. (2017) suggest that the basic word order is VOS, based on incorporation data. Throughout their paper, they show that noun incorporation is default where it is possible for it to occur (i.e., if the noun is an internal argument and the verb allows incorporation). This is shown in (10):

(10) a.

Oh	nahátiere’	ne	Sewátis?
oh	na-r-at-ier-e’	ne	Sewatis
Q	PART-MSGA-SRFL-do-PUNC	NE	John

‘What did John do?

b. Wahahonwahní:non'.
wa'-ra-honw-a-hninon-'
FACT-MSGA-boat-LK-buy-PUNC
'He bought a boat.' (DeCaire et al. 2017:6, dialect unknown)

However, they show that certain information structural factors can force "excorporation" of incorporable themes. They emphasize the fact that focus on the incorporable *noun* causes excorporation of that noun (discussed further in Section 5.4), but towards the end of their paper, they note that focus on an incorporating *verb* also forces excorporation. When this occurs, the verb is fronted, and the linear order of subject and object following the verb is fixed as VOS. This is shown in (11); although contexts are not provided for these examples, the verb is assumed to be focused in (11a), and they claim that the VSO order in (11b) is questionable at best. They suggest that this is due to the fact that the verb and the object form a constituent and cannot be separated by the subject.

(11) a. [Wa'ehní:non']$_{FOC}$ ne kahonwé:ia ne Wá:ri.
wa-e-hninon-' ne ka-honwei-a' ne Wari
FACT-FI.A-buy-PUNC NE N-boat-NS NE Mary (VOS)

b. *?[Wa'ehní:non']$_{FOC}$ ne Wári ne kahonwé:ia.
wa-e-hninon-' ne Wari ne ka-honwei-a'
FACT-FI.A-buy-PUNC NE Mary NE N-boat-NS (VSO)
'Mary BOUGHT a boat.' (DeCaire et al. 2017:15, dialect unknown)

However, the two examples in (12) show that, in fact, it is acceptable to have VSO order when the verb is focused. In these examples, the most natural way to say this would be to say simply *ronwáhsere*, the verb, as the girl and the dog had already been established as part of the context earlier and do not need to be repeated. However, when asked to pronounce both nouns, the speaker actually preferred the subject to come before the object.

(12) **Context**: You tell someone that the girl is following the dog, but they don't hear and ask you, 'What is the girl doing to the dog?'

a. [Ronwáhsere]$_{FOC}$ ne ieksá:'a ne é:rhar.
ronwa-hsere ne ieksa'a ne erhar
FI>MSG-follow.STAT NE girl NE dog (VSO)

b. ?[Ronwáhsere]$_{FOC}$ ne é:rhar ne ieksá:'a.
ronwa-hsere ne erhar ne ieksa'a
FI>MSG-follow.STAT NE dog NE girl (VOS)
'The girl is FOLLOWING the dog.' (McDonald 2024)

Additionally, speakers I consulted also accepted (11b), suggesting that VSO is indeed an acceptable word order. Part of the difficulty with VSO that DeCaire et al. (2017) report could also be context-dependent, but this is difficult to tell without any contexts provided.

The claim in DeCaire et al. (2017) is further complicated by the fact that VSO is attested several times in the stories in Williams (1976). While there are only 4 sentences with this order, there is only one sentence with VOS order. Another naturally-occuring VSO sentence is shown in the example in (13) below.

(13) **V** **S**

Wahonská:neke'	ronónha	ó:ni'	ahotiién:take'	ne
Wa-ron-askanek-e'	rononha	oni'	a-roti-ient-a-k-e'	ne
FACT-MPLA-wish.for-PUNC	MPL.PRO	also	OPT-MPLP-have-JR-CONT-PUNC	NE

O

kahwén:kare'...
ka-hwenkar-e'
N.A-snowshoe-NSF

'They were longing for their own snowshoes...' (Kaieríthon 1976b, K.)

It may seem surprising that, if VSO is in fact the basic word order, it is so uncommon in the narratives examined in *Kanien'kéha Okara'shón:'a*. However, this is a pattern that has been seen in other pro-drop/rich agreement and verb-initial languages; as Clemens & Coon (2018) point out for Mayan languages, which are almost all verb-initial, verb-initial word order can be uncommon due to the prevalence of preverbal topics, foci, and relativization constructions. I suggest that this is also true of Kanien'kéha.

4.2 Lack of A-movement, The Mirror Principle and morphological word-building

VSO as a base word order is also consistent with the hypothesis that there is no A-movement in Kanien'kéha. I follow Baker (1996) in assuming that, in a neutral sentence, subjects remain low in the clause and there is no EPP in Kanien'kéha; the subject stays in Spec,VoiceP rather than moving to Spec,TP. This leaves the position in Spec,TP open for focus movement.

Much like verb-initial Mayan languages, Kanien'kéha lacks processes associated with movement to Spec,TP: there are no raising verbs, no evidence that unaccusative or passive subjects are A-moved, and no evidence for any EPP movement to Spec,TP (Coon et al. 2021). This is explored in Koenig & Michelson 2015; the authors note in a footnote that Oneida (very closely related to Kanien'kéha) contains no proper raising verbs, because there are no sentences in which the subject of the argument clause "raises" either metaphorically or literally to become the subject of a raising verb. Koenig & Michelson (2015) also note that Oneida contains no evidence of reordering of syntactic arguments for passive constructions; there are no passives in the language. Finally, there are no infinitives in Kanien'kéha; every verb is obligatorily inflected for a pronominal prefix and an aspect (Baker 1996)[5]. All three of these facts constitute further evidence that there is no automatic A-movement of subjects to Spec,TP in the language.

Verb-initial word order also fits nicely within theories of morphological word-building as explored in Baker (1985). The Mirror Principle, stated in (14), is one of the more well-known theories of morphological word building:

(14) *The Mirror Principle (Baker 1985:375)*:

a. Morphological derivations must directly reflect syntactic derivations (and vice versa).

The Mirror Principle has the implication that the morphology that appears closer to the verb root must occupy heads that are closer to the root (and morphology that appears farther from the root must occupy heads farther from the root). This appears to be reflected in Kanien'kéha morphology. Recall the basic verb template from Section 2, repeated in (15):

[5]Imperatives are a notable exception to this rule; they still require a pronominal prefix but appear without aspectual suffixes (see Myers & Mittelstaedt to appear).

(15) *Verb template (adapted from Michelson 2023)*

prepronominal prefixes	pronominal prefix	reflexive/ semire-flexive	incorporated noun	verb root	derivational suffixes	aspectual suffixes	tense

Looking more closely at the derivational suffixes, which appear closest to the verb root, these morphemes seem to obey common crosslinguistic ordering. The expanded derivational template is shown in (16):

(16) *Derivational suffixes template (adapted from Michelson (2023))*

inchoative/ reversive	causative	instrumental	benefactive	distributive	purposive

Boles (2024) argues that this structure reflects common cross-linguistic patterns (for example, inchoative/reversive morphology often appear very close to the root, and benefactive usually appears after eventizing morphology such as inchoatives). He also argues that the derivational morphology in Kanien'kéha shows Mirror Principle effects as they are all suffixal, and that VoiceP is a good candidate for the domain of morphological word-building in this language. I agree with this intuition, but I will argue further that the verb continues to move up through the clausal spine past VoiceP, eventually landing in T, where it stays barring further focus or topicalization movement.

Further evidence for the verb continuing to move arises from examining some aspectual patterns in Kanien'kéha. Aspectual morphology always appears after derivational suffixes, as seen in the template in (15). The example in (17) shows the habitual suffix occurring after the distributive suffix, one of the highest projections along the derivational spine, while the example in (18) shows the punctual suffix occurring after the benefactive, also shown to be higher in the derivational spine/further away from the verb root.

(17) Ne ki ne otsí:tsia konhrhoriánions.
ne ki ne otsitsia kon-hrhori-a-nion-s
NE ki NE flower 1SG>2SG-tell-JR-DISTR-HAB
'This is the plant I was telling you about.' (McDonald 2024)

(18) Katya wahshakotsitiahní:non'se'.
Katya wa-hshako-tsiti-a-hninon-'s-e'
Katya FACT-MSG>FI-flower-JR-buy-BEN-PUNC
'He bought flowers for Katya.' (McDonald 2024)

Given that the Aspectual projection (AspP) is usually represented as a projection above VoiceP (Coon 2025), it follows from the Mirror Principle that the verb must continue to move up to Asp, which follows from both the habitual and the punctual surfacing after derivational morphology in Kanien'kéha.[6]

[6]The stative is often listed as a third aspect in Kanien'kéha. However, some work has argued that the stative is not a grammatical aspect on par with the habitual and punctual (see Ormston 1993 and Baker & Travis 1998). I follow Coon (2025) in assuming that the stative acts more like a light verb, occupying a $v\mathrm{P}_{\mathrm{BE}}$; this also helps explain why the stative sometimes appears 'inside' other derivational morphology, as in the example below:

Having motivated the verb continuing to move up through Asp since aspectual morphology (habitual and punctual) both suffix after derivational morphology, I finally argue that the verb must move one more time to land in T.

Evidence for this movement comes from a suffix called the 'former past', usually surfacing as *-hkwe'*, *-kwe'* or *-hahkwe'* (Martin 2023, Gatchalian 2024).[7] This suffix can appear on habitual verbs that take the suffix *-s* as well as stative present and state verbs, in which case it surfaces as *hkwe'* or *-hahkwe'* (Martin 2023). One example is shown below, with the former past occurring after the distributive suffix:

(20) Iah nonwén:ton tekekhón:niskwe!
Iah nonwén:ton te-ke-kh-onni-s-kwe
NEG ever NEG-1SGA-food-make-HAB-FORM.PST
'I never cooked!' (McDonald 2024)

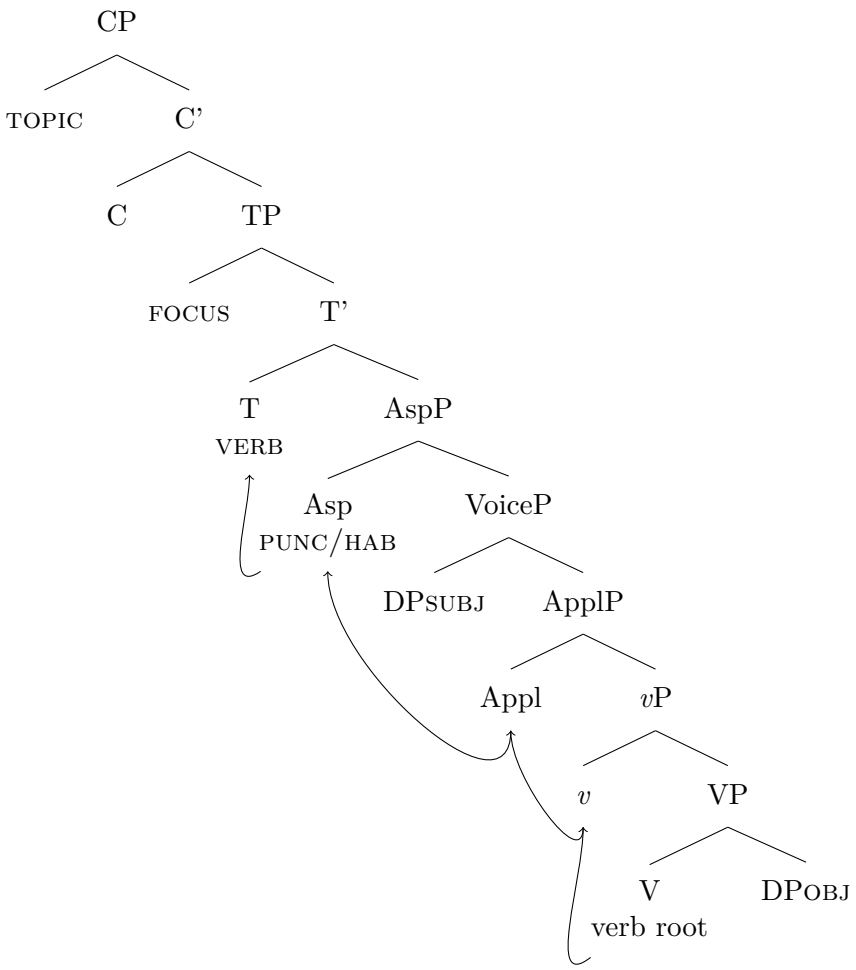
I follow Gatchalian (2024) in assuming that the former past suffix is a true Tense suffix and occupies T in the tree. Because the former past is suffixing (and also surfaces after the habitual, which is in Asp), this fits nicely with the idea that the verb eventually ends up in T. Moreover, Gatchalian (2025) also argues that T^0 is always present in the structure, even when it is null; this means that the verb always raises to T, even when there is no overt tense suffix. This, in conjunction with the assumption that there is no EPP for subjects in Kanien'kéha, successfully derives VSO word order in neutral sentences. To summarize, a fuller structure for a VSO Kanien'kéha sentence (without noun incorporation, and including the projections Appl and *v* which may contain the benefactive and causitive derivational affixes (Coon 2025)) is shown below:

(19) Tehati'tsónstha'.
te-hati-'ts-on-st-ha'
DUP-MPLA-dirty-STAT-CAUS-HAB
'They used to make it dirty.' (Baker & Travis 1998:166)

I will not address the stative in more detail in this work; the important takeaway is that the habitual and punctual aspects both occupy Asp, while the stative occupies a different head.

[7] There is another suffix in Kanien'kéha called the 'remote past', which is restricted to a subset of specific verbs and encodes a cessation entailment rather than a cessation inference, as the former past does (Gatchalian 2024). Based on this difference, Gatchalian (2024) has argued that the remote past is not a true Tense suffix, but rather an event-structural operator. I therefore do not address it here.

(21)



Based on morphological word-building effects and the Mirror Principle, I therefore argue that the base word order in Kanien'kéha is VSO. As briefly discussed above, there is no evidence of A-movement in Kanien'kéha (there are no raising verbs, passives, or infinitives in the language), so the subject does not raise to Spec,TP; this position is reserved for focus. However, the verb does raise as high as T, deriving a base word order of VSO. The implication that arises from this analysis is that any constituent that appears before the verb must be either topicalized or focused; I argue that this is indeed the case. It also fits with a general intuition among speakers that "whatever is most important comes first" in the sentence (Mary McDonald, p.c.). The high prevalence of SVO order shown in Figure 1 is therefore likely due to the tendency of subjects to be either topicalized or focused, since subjects are often the "most important thing". A prevalence of SVO word order in elicitation settings could also be due to the influence of English order on Kanien'kéha sentences, since elicitation sessions were conducted in English.

As works such as England 1991 have pointed out, the concept of 'basic word order' in the first place is somewhat flawed, as different criteria are used by different linguists and the simplicity of determining a basic word order varies greatly from language to language. As this section has shown, there are a lot of complications in attempting to determine a basic word order for Kanien'kéha, largely due to very frequent *pro*-drop of both subjects and objects and noun incorporation of eligible themes. However, evidence from morphological word-building and the location of affixes in the language points to the verb landing in T, while the lack of raising verbs, A-movement, and

infinitives indicates that subjects and objects remain in-situ in Spec,VoiceP and as the complement of V, leading to VSO order when nothing is topicalized or focused. The fact that VSO is so uncommon in both elicitation sessions and in narratives follows from the fact that, if a sentence is truly 'neutral', the subject is likely to be dropped and the object likely to be incorporated, since neither are information-structurally marked in a neutral sentence.

5 Focus

As sketched in the proposal, I will argue that there is a position in the left periphery in Kanien'kéha reserved for focus, specifically Spec,TP. Before getting into the details of the evidence for this, however, I will first provide an overview of some common diagnostics for focus cross-linguistically.

5.1 Diagnosing focus

Aissen (2023) provides an overview of information structural properties across languages and mentions a few common properties of focus to look out for. First, she explains that focus is usually new information that must be identified against a presupposed background. For example, in (22), the presupposed background is that Kim is going somewhere, and the focus is the element of the answer which is not present in the question, namely PRAGUE. Similarly, in (23), the presupposed background is that someone is going to Prague, and the focus is on KIM, which is the element of the answer not present in the question. In English (and other languages such as Chichewa, German, Greek and Japanese (Büring 2009)), focused constituents are marked prosodically, as in examples (22) and (23) (indicated by small caps). English can also occasionally express focus through clefts, as in example (24):

(22) a. Q: Where is Kim going?
b. A: She's going to PRAGUE.

(23) a. Q: Who is going to Prague?
b. A: KIM's going to Prague.

(24) a. Q: Who is it that's going to Prague again?
b. A: It's KIM (that's going to Prague). (implied: no one else is going to Prague) (Aissen 2023)

Other languages (including Hungarian (Kiss 1998), Hausa (Hartmann & Zimmerman 2007), and Nlekepmxcin (Koch 2008, Koch & Zimmermann 2010)) have specific syntactic positions for focus, often high in the clause. As the remainder of this section will show, this is also true for Kanien'kéha.

Aissen (2023) also discusses several different types of focus. The most simple of these subcategories is *information* focus (exemplified in (22)-(24) above), which usually makes a minimal assertion, providing new information in answer to a question. The four other types of focus that she mentions can all be understood as subcategories of *contrastive* focus. One is *corrective* focus, which corrects an assertion. *Selective* focus selects from several alternatives raised by a previous utterance. *Additive* focus accepts an utterance as a partial answer, but adds another element to make the answer complete. Finally, *exhaustive* focus rejects an utterance with two or more propositions by indicating that one constitutes an exhaustive answer, thereby rejecting the others. These are exemplified in (25)-(28) below.

(25) Corrective:

a. Kim had pancakes for breakfast.

b. No, she had EGGS for breakfast.

(26) Selective:

a. Did Kim have pancakes or eggs for breakfast?

b. Kim had EGGS for breakfast.

(27) Additive:

a. Kim had pancakes for breakfast.

b. Yeah, she also had EGGS for breakfast.

(28) Exhaustive:

a. Did Kim have eggs and pancakes for breakfast?

b. She only had EGGS for breakfast.

As the following sections will show, each of these subcategories of focus are expressed in the same way in Kanien'kéha.

5.2 Information focus

In their brief discussion of focus in Kanien'kéha, DeCaire et al. (2017) mention that their analysis of the left-periphery focus position might need to be further refined to different types of focus. In their paper, they discuss information focus, mostly in the context of noun incorporation; they claim that incorporation is default where it is possible for it to occur, and when it does not occur it is "excorporation." They argue that these "excorporated" forms only arise under focus conditions. I will first provide a brief overview of information focus that confirms DeCaire et al. (2017)'s predictions before examining some other types of focus that they do not mention in their paper.

As the example in (29) shows, answering a question about the subject of a sentence requires that subject to be in initial position in the sentence. The subject also must be overt in order to be focused. In (29b), the name *Wíshe* obligatorily appears in initial position, and it cannot be dropped, as in the infelicitous example in (29c).

(29) **Context:** One of your children has broken a toy, and you're trying to figure out who did it.

a. Ónhka wa'kiérihte' ne iontkahri'táhkhwa'?
onhka wa'-t-ie-riht-e' ne ion-atkahri-'t-a-hkhw-a'
who FACT-DUP-FI.A-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'Who broke the toy?'

b. [Wíshe]$_{FOC}$ wa'thá:rihte' ne iontkahri'táhkhwa'!
Wíshe wa'-t-ra-riht-e' ne ion-atkahri-'t-a-hkhw-a'
Wíshe FACT-DUP-MSGA-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'WÍSHE broke the toy!'

c. #Wa'thá:rihte' ne iontkahri'táhkhwa'!
wa'-t-ra-riht-e' ne ion-atkahri-'t-a-hkhw-a'
FACT-DUP-MSGA-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'He broke the toy!" (McDonald 2024)

This pattern is further elucidated through the use of independent pronouns in (30). As mentioned in Section 2, Kanien'kéha makes use of certain free-standing pronouns when a pronominal subject is focused. Another way to answer the question in (30a) is with (30b), which utilizes the masculine singular independent pronoun *ráonha*. It is also infelicitous to answer this question without the independent pronoun, as shown in (30c). The examples in (29) and (30) both confirm that an overt element in initial position is necessary to express focus in Kanien'kéha.

(30) **Context:** One of your children has broken a toy, and you're trying to figure out who did it.

a. Ónhka wa'kiérihte' ne iontkahri'táhkhwa'?
onhka wa'-t-ie-riht-e' ne ion-atkahri-'t-a-hkhw-a'
who FACT-DUP-FI.A-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'Who broke the toy?'

b. [Raónha]$_{FOC}$ wa'thá:rihte' ne iontkahri'táhkhwa'!
raonha wa'-t-ra-riht-e' ne ion-atkahri-'t-a-hkhw-a'
MSG.PRO FACT-DUP-MSGA-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'HE broke the toy!'

c. #Wa'thá:rihte' ne iontkahri'táhkhwa'!
wa'-t-ra-riht-e' ne ion-atkahri-'t-a-hkhw-a'
FACT-DUP-MSGA-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'He broke the toy!" (McDonald 2024)

One other thing to note for this example is the particle *ne* that precedes the object *iontkari'táhkwa'* ('toy'). This is a common pattern in Kanien'kéha; when an argument follows the verb, it is usually obligatorily preceded by *ne*, whose exact functions are still unclear. This particle will be discussed further in Section 6.

Additionally, as the examples in (31) and (32) show, it is infelicitous for a constituent other than the subject to appear first in an answer to the question in (29a). First, as shown above, answering this question with the verb in initial position is infelicitous:

(31) a. Ónhka wa'kiérihte' ne iontkahri'táhkhwa'?
'Who broke the toy?'

b. #[Wa'thá:rihte']$_{FOC}$ (raónha) ne iontkahri'táhkhwa'!
wa'-t-ra-riht-e' raonha ne ion-atkahri-'t-a-hkhw-a'
FACT-DUP-MSGA-break-PUNC MSG.PRO NE FI.A-play-CAUS-JR-INSTR-NSF
'He BROKE the toy!' (McDonald 2024)

- **Speaker Note:** This would sound better after the question 'What did he do?'

Note that the example in (31b) is not improved by the presence of the independent pronoun *raónha*, suggesting that it truly needs to be in initial position in order to be felicitously focused. The presence of an overt argument alone is not enough to express a focused reading; despite the

fact that independent pronouns are clearly used to express emphasis, the pronoun still must be fronted here.

Answering this question with the object in initial position instead sounds just as strange:

(32) a. Ónhka wa'kiérihte' ne iontkahri'táhkhwa'?
'Who broke the toy?'

b. #[Iontkahri'táhkhwa']$_{FOC}$ wa'thá:rihte'!
ion-atkahri-'t-a-hkhw-a' wa'-t-ra-riht-e'
FI.A-play-CAUS-JR-INSTR-NSF FACT-DUP-MSGA-break-PUNC
'He broke the TOY!' (McDonald 2024)

- **Speaker Note:** This would sound better after the question 'What did he break?'

Meanwhile, if it is the object instead of the subject that is being questioned, it unsurprisingly sounds the most natural to place the object in initial position, as shown in (33).

(33) **Context:** You heard a crash and you know your son must have broken something, but you don't know what he broke.

a. Nahò:ten wa'thá:rihte'?
nahoten wa'-t-ha-riht-e'
what FACT-DUP-MSGA-break-PUNC
'What did he break?'

b. [Iontkahri'táhkhwa']$_{FOC}$ wa'thá:rihte'!
ion-atkahri-'t-a-hkhw-a' wa'-t-ra-riht-e'
FI.A-play-CAUS-JR-INSTR-NSF FACT-DUP-MSGA-break-PUNC
'He broke the TOY!' (McDonald 2024)

These findings confirm DeCaire et al. (2017)'s proposal that information-focused elements will always appear in initial position. I will now turn to other types of focus which DeCaire et al. (2017) did not mention in their paper, but which also confirm that no matter the type of focus, the focused element always ends up in the same left-periphery focus position.

5.3 Other types of focus

Corrective, selective and additive focus environments show the same patterns as information focus, confirming that focused elements occupy a left-periphery focus position, no matter the type.

5.3.1 Selective focus

One subcategory of focus that Aissen (2023) describes is selective focus, which involves picking one option out of a set of contextually salient alternatives. The examples in (34) below show that selectively focused elements also end up in the same initial focus position described above.

(34) **Context:** You know that it is either Chase or Sophia who is moving away soon, but you can't remember who.

a. Chase katon Sophia ionhtenkiónhe'?
Chase katon Sophia ion-ahtenti-on-h-e'
Chase or Sophia FI.A-go.away-STAT-PURP-PUNC
'Is it Chase or Sophia that's moving away?'

b. [Chase]$_{FOC}$ rahtenkiónhe'.
Chase ra-ahtenti-on-h-e'.
Chase MSGA-go.away-STAT-PURP-PUNC
'CHASE is moving away.' (McDonald 2024)

Once again, it sounds strange to put something that is not being questioned (such as the verb, as in (35b)) in initial position. Note that *ne* now appears before the subject, *Chase*; as previously mentioned, this is a common pattern in Kanien'kéha when an argument of the verb linearly follows it.

(35) a. Chase katon Sophia iontenkiónhe?
'Is it Chase or Sophia that's moving away?'

b. #[Rahtenkiónhe']$_{FOC}$ ne Chase.
ra-ahtenti-on-h-e' ne Chase.
MSGA-go.away-STAT-PURP-PUNC NE Chase
'Chase is MOVING away.' (McDonald 2024)

5.3.2 Corrective focus

A second subcategory of focus is corrective focus. These constructions occur when a speaker corrects a previous utterance. In this context, the polar question in (36a) calls for the speaker to answer in the negative and follow up with a correction in order to obey Grice's Maxim of Quantity (make your contribution as informative as is required for the current purposes of the exchange) (Aissen 2023, Grice 1975). The correction in (36b) confirms that correctively focused elements also must appear initially in Kanien'kéha. If another constituent is pronounced first instead, as in (36c), the intended meaning no longer arises; the sentence now means something completely different.

(36) **Context:** A storyboard shows a dog chasing a boy.

a. Takó:s ken róhsere ne raksá:'a?
takos ken ro-hsere ne ra-ksa-'a
cat Q MSG>MSG-follow.STAT NE MSGA-child-DIM
'Is a cat following the boy?'

b. Iah, [érhar]$_{FOC}$ róhsere ne raksá:'a.
iah erhar ro-hsere ne ra-ksa-'a
NEG dog MSG>MSG-follow.STAT NE MSGA-child-DIM
'No, the DOG is following the boy.'

c. #Iah, [raksá:'a]$_{FOC}$ róhsere ne érhar.
iah, ra-ksa-'a ro-hsere ne erhar.
NEG MSGA-child-DIM MSG>MSG-follow.STAT NE dog
'No, the BOY is following the dog.'
cannot mean: 'No, the DOG is following the boy.' (McDonald 2024)

The example in (37) shows that the word order changes again when corrective focus is placed on the object rather than the subject. Notice that the correction in (37b) is nearly identical to the infelicitous expression in (36c), and similarly, the most natural answer in (36b) is infelicitous as a response to (37a). These examples confirm that the correctively focused constituent consistently appears initially.

(37) **Context:** A storyboard shows a dog chasing a boy.

a. Ieksá:'a ken shakóhsere ne érhar?
ie-ksa-'a ken shako-hsere ne erhar
FI.A-child-DIM Q MSG>FI-follow.STAT NE dog
'Is the dog following the girl?'

b. Iah, [raksá:'a]$_{FOC}$ róhsere.
iah ra-ksa-'a ro-hsere.
NEG MSGA-child-DIM MSG>MSG-follow.STAT
'No, it's following the BOY.'

c. #Iah, [érhar]$_{FOC}$ róhsere ne raksá:'a.
iah erhar ro-hsere ne ra-ksa-'a.
NEG dog MSG>MSG-follow.STAT NE MSGA-child-DIM
'No, the DOG is following the boy.' (McDonald 2024)

5.3.3 Additive focus

Examples of additive focus also confirm the existence of a left-periphery focus position in Kanien'kéha. In the following examples, the constituent that is focused always occurs in initial position, followed directly by the particle *ó:ni*, meaning 'also'.

First, (38) shows additive focus being placed on the subject of a sentence.

(38) **Context**: You're at a restaurant, and the server asks you who out of your group will be ordering the chicken.

a. Í: tewakatonhontsió:ni ne kitkit.
i te-wak-atonhontsioni ne kitkit
1PRO DUP-1SGP-want.STAT NE chicken
'I want the chicken.'

b. Jessica ó:ni teiakotonhontsió:ni ne kitkit.
Jessica oni te-iako-atonhontsioni ne kitkit
Jessica also DUP-FI.P-want.STAT NE chicken
'JESSICA also wants the chicken.' (McDonald 2025)

Next, (39) shows additive focus being placed on the object of a sentence. Once again, here the object must be fronted and followed by *ó:ni*, indicating its status as focused.

(39) **Context**: You had both eggs and fruit for breakfast, and I ask if you had eggs for breakfast.

a. O'nhónhsa ken wahseke'?
o-'nhonhs-a ken wa-hse-k-e'
N.P-egg-NSF Q FACT-2SGA-eat-PUNC
'Did you eat eggs?'

b. Hen, káhi ó:ni wà:keke' tánon' o'nhónhsa.
hen kahi oni wa'-ke-k-e' tanon o-'nhonhs-a
yes fruit also FACT-1SGA-eat-PUNC and N.P-egg-NSF
'Yes, I also had fruit and eggs.' (McDonald 2025)

Note that the noun *káhi* is able to be incorporated into the verb root *k* ('to eat'), but as this example suggests, placing additive focus on the noun forces it to appear outside the verbal complex. Excorporation will be explored in more detail in the following section.

The above three sections have shown that no matter the type of focus, any focused constituent must be in initial position in the sentence (with an important caveat for topic, discussed in Section 6), motivating a focus position high in the clause.

5.4 "Excorporation" as focus

As previewed in Section 2, Kanien'kéha makes frequent use of noun incorporation, in which non-animate themes are incorporated into the verbal complex. In a brief investigation of noun incorporation, DeCaire et al. (2017) relate noun incorporation to information structure. They make the claim that non-noun-incorporation, which they call "excorporation", only arises under focus conditions. This deviated from previous accounts of noun incorporation, such as Baker (1996), which claimed that incorporated and excorporated variants of the same sentence were semantically equivalent.

There are several different syntactic accounts of noun incorporation in Kanien'kéha. Most have assumed a derivational link between incorporated and "excorporated" forms, but recently Boles (2024) has suggested that there is no derivational relationship between the two, and "excorporated" forms are actually the possessors of an inalienably-possessed root. For the purposes of this analysis, I will adopt the proposal in Boles (2024), that V in Kanien'kéha must merge with nPs, and that free-standing nominals (such as proper names, animate nouns, and pronouns) involve structure larger than nP and therefore cannot merge as the complement of V. This provides a convenient account for focus forcing excorporation (explained further below), as focused nominals must have more structure than nP, and also avoids the problem of incorporated nominals needing to head move into the verb and then move back out, as derivational accounts would predict.

DeCaire et al. (2017) make the claim that incorporation is default where it is possible for it to occur. Certain verbs do not allow incorporation of their themes, and some themes (namely animates) may not incorporate, but if incorporation is possible this is the non-marked structure, and excorporation is pragmatically marked.

The example in (40) illustrates their point. First, (40a) illustrates a typical polar question in Kanien'kéha, where *honw*, the noun root for 'boat', has been incorporated into the verbal complex. However, if the answer to the question in (40a) is 'no' followed by a correction, the correctively focused noun must appear outside the verbal complex, as in (40b). The authors also show that (40c), with 'car' incorporated into the verb, is grammatically well-formed, but infelicitous in the given context.

(40) a. Wahahonwahní:non' ken ne Sewátis?
wa'-ra-honw-a-hninon-' ken ne Sewatis
FACT-MSGA-boat-JR-buy-PUNC Q NE John
'Did John buy a boat?'

b. Iah. Kà:sere wahahní:non'.
iah ka-'ser-e' wa'-ra-hninon-'
no N.A-car-NSF FACT-MSGA-buy-PUNC
'No. He bought a CAR.'

c. #Iah. Waha'serehtahní:non'.
iah wa'-ra-'sere-ht-a-hninon-'
no FACT-MSGA-car-NMLZ-JR-buy-PUNC
'No. He bought a car.' (DeCaire et al. 2017:7, dialect unknown)

They also show that it is not just focus on the incorporable noun that forces excorporation; focus on the incorporating verb also requires excorporation for the sentence to be felicitous, but in this case, the object noun follows the verbal complex:

(41) a. Wa'ehní:non' ne kahonwé:ia ne Wá:ri.
wa'-ie-hninon-' ne ka-honwei-a' ne Wari
FACT-FI.A-buy-PUNC NE N.A-boat-NSF NE Mary

b. #Wá:ri wa'ehní:non' ne kahonwé:ia.
Wari wa'-ie-hninon-' ne ka-honwei-a'
Mary FACT-FI.A-buy-PUNC NE N.A-boat-NSF

c. #Kahonwé:ia wa'ehní:non' ne Wá:ri.
ka-honwei-a' wa'-ie-hninon-' ne Wari
N.A-boat-NSF FACT-FI.A-buy-PUNC NE Mary
'Mary BOUGHT a boat.' (DeCaire et al. 2017:15, dialect unknown)

Their claim about excorporation, particularly as it relates to object focus, is further confirmed in my data. When using the term 'only', an exhaustive focus operator (Crnič 2011, Beaver & Clark 2003), to modify an incorporable noun, that noun must be excorporated in order to obtain the intended reading. First, below is a pragmatically neutral sentence, with the root for 'fish' (*entsi*) incorporated into the verb:

(42) **Context:** You're talking about the different types of foods that your friend Sak eats.

a. Sak rentsia'ks.
Sak ra-entsi-a-'k-s
Sak MSGA-fish-JR-eat-HAB
'Sak eats fish.' (McDonald 2025)

In order to say 'He (Sak) eats only fish,' however, 'fish' can no longer appear inside the verbal complex. Instead, the full noun *kéntsion* must be used and placed before the verb, in the initial focus position.

(43) **Context:** The only food Sak eats is fish.

a. Kéntsion khok í:raks.
kentsion khok i-ra-k-s
fish only EPEN-MSGA-eat-HAB
'He only eats fish.' (McDonald 2025)

The following two examples confirm that (43a) is the only way to express this meaning felicitously. Placing *khok* after the verb, as in (44a), is ungrammatical, while placing *khok* after the subject, as in (44b), results in the scope of 'only' switching to the subject.

(44) **Context:** The only food Sak eats is fish.

a. *Sak réntsia'ks khok.
Sak ra-entsi-a-'k-s khok
Sak MSGA-fish-JR-eat-HAB only
'Sak only eats fish.'

b. #Sak khok réntsia'ks.
Sak khok ra-entsi-a-'k-s
Sak only MSGA-fish-JR-eat-HAB
'Only Sak eats fish.'/'Sak is the only one who eats fish.'
cannot mean: 'Sak only eats fish.' (McDonald 2025)

These data confirm that focus on an incorporable object (particularly exhaustive focus, as expressed by the operator 'only') forces excorporation and movement of the object to initial position.

5.5 Exhaustive focus

I make the claim that focus movement in Kanien'kéha involves movement to Spec,TP. Previous literature (e.g. Kiss 1998) has demonstrated that in some languages, there are clear syntactic differences between information focus and identificational focus. Kiss proposes that in Hungarian, identificational focus expresses exhaustivity and involves an operator and movement, while information focus simply conveys new information and does not necessarily involve syntactic reordering. Similarly, in English, clefting involves this operator and movement and therefore carries an exhaustivity inference that regular intonational focus does not.

While Kanien'kéha does display movement to express focus, it seems that, unlike Hungarian, focus movement is not necessarily exhaustive. This suggests that the focus position in Spec,TP is not an exhaustive one.

As explored in the previous section, "excorporation" of an incorporable theme arises in focus constructions. As the following examples show, using the excorporated form of 'bread' in this case gives rise to a focused meaning; the speaker noted that in order to felicitously use the form in (45b), the bread would have to be important in some way (for example, you would need to be talking about a specific or special kind of bread).

(45) **Context:** You're hosting a dinner party, and someone asks what you're planning to cook.

a. Enkatena'tarón:ni'. Onénhsto ó:ni
en-k-ate-na'tar-onni-' o-nenhst-o oni
FUT-1SGA-SRFL-bread-make-PUNC N.P-corn-be.in.water.STAT also
enkatenontarón:ni'.
en-k-ate-nontar-onni-'
FUT-1SGA-SRFL-soup-make-PUNC
'I will make bread. I will also make corn soup.'

b. Kanà:taro enkón:ni'. Onénhsto ó:ni
ka-natar-o en-k-onni-'. o-nenhst-o oni
N.A-bread-NSF FUT-1SGA-PUNC N.P-corn-be.in.water also
enkatenontarón:ni'.
en-k-ate-nontar-onni-'.
FUT-1SGA-SRFL-soup-make-PUNC
'I will make BREAD. I will also make corn soup.' (McDonald 2024)

- **Speaker Note**: best if you are talking about a specific kind of bread

Importantly, these examples also show that it is perfectly felicitous to follow up both the incorporated and excorporated version of the sentence with another focused constituent and the word *ó:ni* ('also'), which patterns similarly to *khok* in that it consistently follows the focused constituent. This suggests that while fronting (and excorporation where applicable) can be used to express every type of focus in Kanien'kéha, focus movement is not necessarily exhaustive. The previous sections have also shown that, for the speakers I have consulted, in-situ focus has been deemed either ungrammatical or strongly dispreferred; any focused constituent is most naturally initial, and information focus questions cannot be answered felicitously without movement. It therefore follows that fronting is not necessarily exhaustive in Kanien'kéha.

Further evidence that fronting does not preclude exhaustivity in Kanien'kéha can be seen in the following examples. First of all, as in the examples in (45), it is perfectly fine to have an excorporated, fronted and focused constituent and follow that up with another focused constituent and 'also'.

(46) a. Nahò:ten wahahní:non' ne Chase?
nahoten wa'-ra-hninon-' ne Chase
what FACT-MSGA-buy-PUNC NE Chase
'What did Chase buy?'

b. Anòn:warore wahahní:non' ne Chase. Akià:tawi ó:ni wahahní:non'.
anonwarore wa'-ra-hninon-' ne Chase akiatawi oni wa-ra-hninon-'
hat FACT-MSGA-buy-PUNC NE Chase shirt also FACT-MSGA-buy-PUNC
'Chase bought a HAT. He also bought a SHIRT.' (McDonald 2024)

Additionally, it is infelicitous to try to cancel an exhaustive inference that might arise with fronted focus by denying it and adding another focused constituent with 'also,' again indicating that fronting does not imply exhaustivity in Kanien'kéha.

(47) a. Anòn:warore wahahní:non' ne Chase.
anonwarore wa'-ra-hninon-' ne Chase
hat FACT-MSGA-buy-PUNC NE Chase
'Chase bought a HAT.'

b. #Iah, akià:tawi ó:ni wahahní:non'.
iah, akiatawi oni wa'-ra-hninon-'.
no shirt also FACT-MSGA-buy-PUNC
'No, he also bought a SHIRT.' (McDonald 2024)

However, Kanien'kéha may have other ways of expressing exhaustivity. Krifka (2008) mentions that clefts usually give rise to exhaustivity in English, and the question in (48), with *ne* after the *wh*-word *onhka*, was translated into English with a cleft:

(48) **Context:** You know that Chase and at least one other person are coming to visit you at the end of the week, but you can't remember who the other person is.

a. Onhka ne ska'tne Chase tà:ne'?
onhka ne ska'tne Chase t-a-hn-e-'
who NE together Chase CIS-FACT-MDUA-motion-PUNC
'Who is it that's coming with Chase?' (McDonald 2024)

Additionally, as previously mentioned, Kanien'kéha has independent pronouns that can be used to express emphasis of a pronominal subject. The independent pronoun for first person singular is *í:'i*, which has a shortened form *í:* (of the independent pronouns, only *ì:'i* has a shortened form). In answer to the question in (48), the speaker used the reduced form, and noted that the use of the reduced pronoun specifically implies that it is only me that is coming with Chase.

(49) [Í:]$_{FOC}$ Chase taiákene.
í: Chase t-a-iaken-e-'
I Chase CIS-FACT-1EXCL.DUA-go-PUNC
'I'm coming with Chase.' (McDonald 2024)

The combination of this answer, in addition to the cleft-like translation of the question that prompted it, suggests that this pair might be an example of exhaustive focus in Kanien'kéha. This would be especially interesting as it implies that Kanien'kéha has a similar way of expressing exhaustive focus as English does: through clefts.

The use of the shortened pronoun *í:* and the speaker's comment that this reduced pronoun makes it sound like 'it is only me' also implies that *í:* gives an exhaustive reading (as opposed to its longer form *í:'i*, perhaps more commonly used in information focus constructions). However, as seen in (50), correctively focused constructions can also appear with the shortened pronoun *í:*:

(50) **Context:** You are ordering food at a restaurant for you and your friend Katya, and the server doesn't hear what it was that Katya wanted, so they ask whether Katya wants the duck. You respond that you are the one who wants the duck.

a. Katya ken sóra én:ieke'?
Katya ken sora en-ie-k-e'
Katya Q duck FUT-FI.A-eat-PUNC
'Will she, Katya, eat the duck?'

b. Iah, {í:}$_{FOC}$ sóra én:keke'.
Iah, i sora en-ke-k-e'.
NEG I duck FUT-1SGA-eat-PUNC
'No, I will eat the duck.' (McDonald 2024)

It is possible that the environment in (50) is also exhaustive, in which case exhaustivity might truly be part of the explanation for alternations between *í:* and its longer form *í:'i*, but more data would be needed to confirm this.

Further evidence for cleft-like uses of *ne* comes from Feurer (1976), who analyzes *né:'e* as a cleft marker based on the following examples:

(51) a. Q_1: Io'tká:te ken **né:'e** tesenithárha' onkwehonwehnéha?
io'tkate ken ne'e te-seni-tharha-' onkwe-honweh-neha
often Q CLFT DUP-2DUP-talk.together-STAT person-GEN-CUS
'Is it often that you talk together in Kanien'kéha?'

b. A_1: Iah teio'tká:te' **né:'** tehóntstha' kowanéha nonkwanónhskon.
iah te-iotkate ne' te-hon-tstha-' kowa-neha n-onkwa-nonhs-kon
NEG NEG-often CLFT NEG-MPLA-use-STAT AUG-CUS NE-1EXCL.PLA-house-LOC
'(No), it is not often that they use Kanien'kéha in our house.'

c. Q_2: Hen? (rising intonation)
hen
yes
'Yes, really?'

d. A_2: Neio'tká:te' ne tiorhén:sha **né:**ne o'seronni'kéha.
ne-iotkate ne tiorhensha ne-ne oseronni'keha
PART-often NOM English CLFT-NOM French
'It is often that they use English and French.' (Feurer 1976:98-99, K.)

It therefore seems likely that one of the many functions of *ne* is that it can function as a cleft particle, turning sentences into clefts.[8] It would therefore make sense that the focus position in Kanien'kéha is non-exhaustive, since, like English, the way to focus something exhaustively in the language is through clefts.

This conclusion is tentatively supported by a handful of examples from narratives which contain potential cleft-like uses of *ne*. For example, in (52), *ne* is present as a cliticized prefix, and the translation ('you're the one') indicates that this sentence could be analyzed as a cleft.

(52) O:nen ní:se' senhé:ion.
onen n=ise' s-enhei-on
now NE=2PRO 2SGP-die-STAT
'You're the one that is dead.' (Phillips 1976b, K.)

In another sentence from a different story, the original word-by-word translation given in the book translates *ne'* (this time written with a glottal stop) as 'it is.' The free translation also indicates a cleft construction:

[8] One of the many complications in determining the function of *ne* is that there are multiple versions of this particle; regular *ne*, but also long *né:*, *né:'e*, *nene*, etc. It's possible that the short *ne* is the one that has determiner-like properties, since this is the one that usually precedes nouns, while long *né:* or *né:'e* is the particle with cleft-like uses. But since length of *ne* is rarely noted in narratives and unclear in elicitation, this is difficult to determine; I leave this for future work.

(53) Tsi iahonwawén:nara'ne' nia'té:kon
tsi i-a-ronwa-wenn-a-ra-'n-e' nia'tekon
as TRANS-FACT-MPL>MSG-word-JR-speak-INCH-PUNC a.lot.of.things
wahonwari'wanontennión:hahse' tho niió:re' iá:ken' ó:nen
wa'-ronwa-ri'w-a-nontennion-hahs-e' tho niiore' iaken onen
FACT-MPL>MSG-matter-JR-ask-BEN-PUNC there as.it.is.far it.is.said now
iahónttoke', kwáh iá:ken' **ne'** kí:ken ronatén:ro' iah
i-a-ron-attok-e' kwah iaken' ne' kiken ron-atenro iah
TRANS-FACT-MPLA-notice-PUNC EMPH it.is.said NE' this MPLP-be.friends.STAT NEG
teshatá:ti'.
te-s-ra-tati-'
NEG-REP-MSGA-speak-PUNC
'They asked him all kinds of questions. It was then that they noticed that he could not speak Mohawk. In fact, he could not speak at all.' (Kariwénhawe' 1976a, K.)

In general, more work would be necessary to elucidate the cleft-like uses of *ne* and the shortened versions of these independent pronouns.

5.6 A note on *wh*-phrases

I suggest, following DeCaire et al. (2017), that *wh*-words belong in the same position as focus (although since I argue that focus belongs in Spec,TP, not Spec,CP, this is where *wh*-questions move to as well). This is based primarily on the fact that foci and *wh*-phrases are in complementary distribution and appear in the same position, as shown in the information focus examples in Section 5.1, repeated below:

(54) **Context:** One of your children has broken a toy, and you're trying to figure out who did it.

a. Ónhka wa'kiérihte' ne iontkahri'táhkhwa'?
onhka wa'-t-ie-riht-e' ne ion-atkahri-'t-a-hkhw-a'
who FACT-DUP-FI.A-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'Who broke the toy?'

b. [Raónha]$_{FOC}$ wa'thá:rihte' ne iontkahri'táhkhwa'!
raonha wa'-t-ra-riht-e' ne ion-atkahri-'t-a-hkhw-a'
he FACT-DUP-MSGA-break-PUNC NE FI.A-play-CAUS-JR-INSTR-NSF
'HE broke the toy!' (McDonald 2024)

(55) **Context:** You heard a crash and you know your son must have broken something, but you don't know what he broke.

a. Nahó:ten wa'thá:rihte'?
nahoten wa'-t-ra-riht-e'
what FACT-DUP-MSGA-break-PUNC
'What did he break?'

b. [Iontkahri'táhkhwa']$_{FOC}$ wa'thá:rihte'!
ion-atkahri-'t-a-hkhw-a' wa'-t-ra-riht-e'
FI.A-play-CAUS-JR-INSTR-NSF FACT-DUP-MSGA-break-PUNC
'He broke the TOY!' (McDonald 2024)

While it may seem strange that *wh*-words move to Spec,TP rather than Spec,CP, this is what Aissen (1992) argues for Mayan languages: both foci and *wh*-words move to Spec,TP. I suggest that this is true in Kanien'kéha as well. The fact that T can bear A'-movement features also finds precedence in previous literature on Malagasy and Wolof. For example, Martinović (2015) argues that C^0 and T^0 are bundled to form a single head which bears both Wh* and A-movement features. Ting (2023), following this proposal, also argues that *wh*-words and focus both A'-move to Spec,CTP in Malagasy, and the CT head bears both A' and A-movement features. Finally, van Urk (2015) argues for the abandonment of the idea that A- and A'-movement are distinguished by the position they target (as argued by Chomsky (1981) and Chomsky (1995)). Instead, he argues that properties of A- and A'-movement can be derived from the idea that they involve different *features*, without needing to posit the existence of A and A'-positions with these properties.

I therefore argue that A'-movement in Kanien'kéha can target the position in Spec,TP, despite traditional assumptions that A'-movement targets CP. This is based on both morphological word-building evidence motivating the verb landing in T, as well as a lack of evidence for any A-movement targeting Spec,TP for subject movement, leaving the position in Spec,TP open for focus or *wh*-movement. The idea that A'-movement is not necessarily associated with a certain position is well-documented in more recent literature, as mentioned above; A'-movement targeting Spec,TP in Kanien'kéha is therefore not as unusual as it might seem.

However, the label of the phrase where focus and *wh*-words land is ultimately not crucial for this analysis. *Wh*-words and focus belonging in a dedicated FocP would also be compatible with the data. Additionally, as Section 6.5 will show, topics can occur to the left of *wh*-words, so what *is* crucial for this analysis is that *wh*-words and foci belong in the same dedicated position, and, as the following section will show, topics belong in a projection higher than the one for focus.

6 Topic

In this section I will provide an overview of what topics can look like in Kanien'kéha, through an investigation of both contrastive topics and topic shifts. I will argue that topics in Kanien'kéha are clause-internal, located in Spec,CP, based on evidence from island tests and embedded topics.

6.1 Diagnosing topic

Topic, as opposed to focus, is slightly harder to define, although the basic understanding is that a topic is what a speaker is talking about (Aissen 2023, Krifka 2008). While focus is usually understood against a presupposition or background, topics are usually juxtaposed against a comment; the topic is identified before the speaker makes a comment about that topic. Aissen (2023) notes that left-dislocation is a common strategy among languages for marking a topic, although topics can also remain in-situ. She also notes that languages often have multiple different ways for managing topics; speakers need a way to first introduce the referent which can subsequently serve as a topic, establish that referent as a topic, indicate a persistence of that topic, and finally shift the topic to a new referent. As the following sections will show, speakers have several strategies for doing this in Kanien'kéha.

Finally, Aissen (2023) mentions that topic and focus should not be understood in opposition to each other; they are different dimensions of information structure and can work in tandem. Once again, we will see that this is true in Kanien'kéha: topics and foci can co-occur.

6.2 Contrastive topics

In her description of topics, Aissen (2023) lists contrastive topics as a subtype of topic constructions. These are two topics that are understood in opposition to each other, often expressed within the same sentence or in immediately adjacent sentences. They can share properties with both non-contrastive topics and contrastive foci, making them sometimes difficult to distinguish from another focused element. Like a non-contrastive shifted topic, contrastive topics establish a new discourse topic, in this case selected from a plural set introduced in the preceding conversation. It is like contrastive focus in that it evokes reference to alternatives, but it is usually non-exhaustive, and can be followed by a pause, unlike focus. The sentences in (56) show some potential examples of contrastive topics.

(56) a. Nahò:ten ninòn:wes ne sheién:'a tánon' tsién:'a?
nahoten ni-nonwe-s ne she-ien-'a tanon' ts-ien-'a?
what MDUA-like-HAB NE 2SG>FZSG-child-DIM and 2SG>MSG-child-DIM
'What do your daughter and son like?'

b. [Riién:'a]$_{TOP}$ raon'wéskwani ahá:raste, [kheién:'a]$_{TOP}$
ri-ien-'a ra-on'weskwani a-ha-rast-e', khe-ien-'a
1SG>MSG-child-DIM MSGP-enjoy.STAT OPT-MSGA-draw-PUNC 1SG>FI-child-DIM
iakaon'wéskwani ne aiónts wa'te' tewa'á:raton.
iaka-on'weskwani ne a-ion-tswa't-e' tewa'araton.
FI.P-enjoy.STAT NE OPT-FI.A-play-PUNC lacrosse
'My son likes to draw, my daughter likes to play lacrosse.' (McDonald 2024)

In the example in (56b), there is only one element before the verb, consistent with DeCaire et al. (2017)'s proposal that there is only one position before the verb that elements can move to in

Kanien'kéha. It is therefore difficult to tell whether these examples truly contain contrastive topics; perhaps they are instead contrastively focused. However, the examples in (57) and (58) show that contrastive topics and foci can co-occur in the same sentence, with the contrastive topic always to the left of the focus, which is itself to the left of the verb. This shows that they are not in the same position and that in fact, counter to DeCaire et al. (2017), there are at least two preverbal positions in Kanien'kéha.

(57) a. Q: What are you going to buy for your son and daughter for Christmas?

b. [Riién:'a]$_{\text{TOP}}$ [okón:tshera']$_{\text{FOC}}$ enhihnínon'se', tánon
ri-ien-'a okon-tsher-a en-hi-hninon-'s-e', tánon
1SG>MSG-child-DIM paint FUT-1SG>MSG-buy-BEN-PUNC and
[kheién:'a]$_{\text{TOP}}$ [soccer ahthé:non]$_{\text{FOC}}$ enkhehnínonse'.
khe-ien-'a soccer ahtenon en-khe-hninon-'s-e'.
1SG>FI-child-DIM soccer ball FUT-1SG>FI-buy-BEN-PUNC
'For my son, I'll buy paint for him, and for my daughter, I'll buy a soccer ball for her.'
(McDonald 2024)

(58) a. Q: When will you buy them?

b. [Soccer ahthé:non]$_{\text{TOP}}$ [ó:nen]$_{\text{FOC}}$ wakhní:non. [Okón:tshera]$_{\text{TOP}}$ [enióhrhenne']$_{\text{FOC}}$
soccer ahthenon onen wak-hninon. okontshera eniohrhenne'
soccer ball already 1SGA-buy.STAT paint tomorrow
enkhní:non'.
en-k-hninon-'.
FUT-1SGA-buy-PUNC
'The soccer ball, I already bought. The paint, I'll buy tomorrow.' (McDonald 2024)

While not an example of a contrastive topic, further evidence that topics and foci can co-occur can be found in the example in (59). Here, the noun *kéntsion* ('fish') is clearly focused, as indicated by both the excorporation and the fact that it is followed directly by *khok* ('only'), an exhaustive focus operator (Beaver & Clark 2003). The fact that the subject *Sak* can appear before the focused constituent that is marked with *khok* indicates that Sak sits in a topic position, higher than focus.

(59) **Context:** The only food Sak eats is fish.

a. [Sak]$_{\text{TOP}}$ [kéntsion]$_{\text{FOC}}$ khok ì:ra'ks.
Sak kentsion khok i-ra-'k-s
Sak fish only EPEN-MSGA-eat-HAB
'Sak only eats fish.' (McDonald 2025)

6.3 Topic shift

As the previous section suggests, topics appear to be initial in Kanien'kéha, and some examples of topic shift from written narratives confirm this intuition. The example in (60) comes from a story about a mythical figure known as Tharonhiawá:kon. In the previous discourse in this narrative, a battle between a large group of people was being discussed, and in (60b), the topic shifts back to Tharonhiawá:kon, the main character.

(60) a. Akte' nonsakaié:ra'te' tsi ronaterí:io, wahontkwé:ni'.
'The battle turned and they were victorious.'

b. [Tharonhiawá:kon]$_{TOP}$, wahshako'nikonhráta' ne Tekanawíta, tánon'
Tharonhiawakon wa-hshako-'nikonhr-a-t-a' ne Tekanawita tanon'
Tharonhiawakon FACT-MSG>MPL-mind-JR-be.in-PUNC NE Tekanawi:ta and
Aié:wate' nahianitiohkón:ni' ne Kaianere'kó:wa.
Aiewate' n-a-hi-an-itiohk-onni-' ne Ka-ianere-'kowa
Hiawatha PART-FACT-MDUA-SRFL-group-make-PUNC NE N.A-good-big
'Tharonhiawa:kon, he inspired Tekanawi:ta, who was the founder of the League of Peace (League of the Iroquois).' (Kaieríthon 1976d, K.)

Another example from the same story shows a near identical construction. Notice that in both (60b) and (61b), there is a comma after the shifted topic, strongly suggesting a pause after that element. See Section 7.2 for confirmation that shifted topics in Kanien'kéha are indeed commonly followed by a pause, a characteristic feature of topics (Aissen 2023).

The example in (61) shows another potential example of a shifted topic from the same story, also followed by a comma. Here, the previous lines of the narrative had been discussing another character, Tekanawí:ta. In (61b), the topic has switched to a third character already mentioned at the start of the story, Aié:wate'.

(61) a. Wahní:ron', tsi nikarí:wes enkahwatsiratátie' tánon' entkarahwinekénhseke', óhente' entkahnióhseke' tánon ohné:kanos kón:ne's é' thó nikarí:wes enkatátie' ne Kaianere'kó:wa.
'He (Tekanawí:ta) said that this confederacy would last from generation unto generation, as long as the sun shines, the grass grows, and the waters run.'

b. [Aié:wate']$_{TOP}$, wahakwé:ni' wahona'tón:hahse' ne
Aiewate' wa-ra-kweni-' wa-ro-na'ton-hahs-e' ne
Hiawatha FACT-MSGA-be.able-PUNC FACT-MSG>MSG-call-BEN-PUNC NE
Atotárho...
Atotarho...
Atotarho...
'Hiawatha, he went to the wicked Chief Atotarho...' (Kaieríthon 1976d, K.)

6.4 External topics

In addition to the two types of topics described above, some languages can also further distinguish between internal and external topics, as described by Aissen (1992). External topics are base-generated high, adjoined to CP, while internal topics occupy Spec,CP and move to that position, binding a trace. She claims that there are some crucial differences between topics in Mayan languages, arguing that Popti' (formerly Jakaltek) and Tsotsil allow only "external" topics, while Tz'utujil allows both internal and external topics.

External topics have also been referred to by the name Hanging Topic Left Dislocation (HTLD). López (2014) provides an overview of what HTLD looks like across languages, noting that left dislocated elements are often set off from the rest of the sentence by an intonational break and include a resumptive element within the main clause. He notes that reconstruction effects (such as quantifier-variable relations and Binding Theory violations) and island effects can be used to

distinguish HTLD constructions from other dislocation which forms a syntactic dependency with a head in the core clause structure ("internal topics" in Aissen (1992)'s terminology). Importantly, however, López (2014) draws a distinction between polysynthetic and non-polysynthetic languages, using the argument in Baker 1996 that all overt nouns in polysynthetic languages are dislocated. Some evidence from Kanien'kéha suggests that some nouns can indeed be dislocated, as Baker suggests is true of all nouns, but most do belong in argument positions and can be moved to clause-internal topic and focus positions, not base-generated there.

The remainder of this section will explore the possibility of the existence of external topics in Kanien'kéha, ultimately concluding that there is only concrete evidence for internal topics in the language (although the possibility of dislocation remains open).

6.4.1 Third-position *ken*

Kanien'kéha has a question particle *ken* used in yes/no questions. This particle consistently appears in second position in the clause, usually immediately after the constituent being questioned (Feurer 1976). DeCaire et al. (2017) argue that this particle belongs in C. Their analysis of focus belonging in Spec,CP makes the prediction that elements in C should always appear directly after the focused element, which they claim is true for *ken*. As in the example below, if there is a focused element in a yes/no question, the focused element appears in the left periphery, immediatley preceding *ken*:

(62) a. Raónha ken wahahní:non'?
raonha ken wa'-ra-hninon-'
MSG.PRO Q FACT-MSGA-buy-PUNC
'Did HE buy it?'

b. Hen, raónha wahahní:non'.
hen raonha wa'-ra-hninon-'
yes MSG.PRO FACT-MSGA-buy-PUNC
'Yes, HE bought it.' (DeCaire et al. 2017:8, dialect unknown)

However, (63) is an example with the question particle *ken* appearing in third position, following two overt nouns, which is unusual as *ken* is usually a very consistent second-position particle. If *ken* is in C and focus is in Spec,CP, as DeCaire et al. (2017) argue, this would suggest that there is a position higher than Spec,CP for topics that is high-adjoined to the clause (as Baker (1996) suggests is true for all nouns). If that were the case, then *Katya* in (63) would be an external topic, base generated high-adjoined to CP, while *só:ra* would be focused in Spec,CP, and *ken* would be in C.

(63) [Katya]$_{TOP}$ só:ra ken én:ieke'?
Katya sora ken en-ie-k-e'
Katya duck Q FUT-FI.A-eat-PUNC
'Will Katya eat the duck?' (McDonald 2024)

This is a suggestion that seems to be further supported by an observation made by Henhawk & Whitman (2023), who provide the following sentence from Cayuga:

(64) Gwe: [ne? John]$_{TOP}$ dę?ho?dę? a-ha-hní:n-ǫ?
so NE John what OPT-MSGA-buy-PUNC
'So what did John buy? / 'John, what did he buy?' (Henhawk & Whitman 2023:7)

They note that this sentence is unusual in that *ne* appears preverbally, but they state that this example is consistent with Barrie et al. (2014)'s analysis for information structure in Cayuga, which states that the landing site of an interrogative pronoun or *wh*-word is Spec,FocusP, while the position to the left of that is reserved for topics. They argue that the fact that *ne John* appears before the *wh*-word suggests that it is a topic. Again, the fact that it is preceded by *ne* suggests that it might be a different type of topic, especially since neither contrastive nor shifted topics are preceded by *ne*. Perhaps this is an example of an external topic in Cayuga.

However, Henhawk & Whitman (2023) also note that (64) was not accepted by all speakers. Similarly, the sentence in (63) was variably accepted by Kanien'kéha speakers. Specifically, one stated that this sentence only works if there is a significant pause in between *Katya* and *só:ra*, as if you have been rambling about Katya, and then you forget what you were about to say, and then ask about the duck. It seems that *Katya* has to be completely separate from the question in order for this sentence to work, suggesting that this may not be an example of an external topic, or at least that external topics are likely a very marked construction in Kanien'kéha. Additionally, for the speaker who produced the sentence in (63), there was not a significant intonational break between *Katya* and *só:ra*, which is one of Aissen (1992)'s diagnostics for external topics in Mayan languages.

6.4.2 Island effects

Additionally, Aissen (1992)'s other diagnostics for external topics do not hold up in Kanien'kéha. For example, she states that if topics are external, they should be able to be linked to an element in an island, because this linkage consists simply in the coreference relation between a pronoun and its antecedent (the topic) and coreference is not subject to island conditions. On the other hand, focus and internal topics would not be able to be linked to an element in an island because both move and bind a trace. The following example shows that a topic can be coreferential with a (null) pronoun in a relative clause in Tsotsil:

(65) A li Xun-e, ilekup li antz ispoxta-e.
TOP DET Xun-ENC became.well DET woman he.treated-ENC
'Xun, the woman he treated became well.' (Aissen 1992:69)

In contrast, Aissen (1992) provides the following example to show that focus cannot be linked to an element in an island:

(66) *Xun$_j$ la ilekub [li antz$_i$ [ispoxta t_i t_j]] -e
Xun CL became.well DET woman he.treated -ENC
'The woman that XUN treated became well.' (Aissen 1992:69)

However, topics incur island violations in Kanien'kéha; in particular, the adjunct island condition holds in the language and it is impossible to extract topics out of adjuncts.

First, (67) contains an example of a shifted topic within an adjunct. In (67a), the context is introduced that all of the speaker's friends are leaving on trips at different times and the speaker is running different errands for them before they leave. In (67b), the topic shifts to *Katya*, and what the speaker is going to do before she leaves.

(67) **Context:** All of your friends are leaving on trips at different times, and you're going to different places to run errands for them before they leave.

a. Tsi iontenhninòn:hta' iahá:ke' ohén:ton ne Simon
tsi iontenhninontha iah-a-k-e-' ohenton ne Simon
C store TRANS-FACT-1SGA-motion-PUNC before NE Simon
ahahtén:ti'.
a-ra-ahtenti-'
OPT-MSGA-leave-PUNC
'I went to the store before Simon left.' (McDonald 2024)

b. Tsi iehiatonhseraientáhkwa' iahá:ke' ohén:ton ne [Katya]$_{TOP}$
tsi iehiatonhseraientahkwa' iah-a-k-e-' ohenton ne Katya
C library TRANS-FACT-1SGA-motion-PUNC before NE Katya
aionhtén:ti'.
a-ion-ahtenti-'
OPT-FI.A-leave-PUNC
'I went to the library before Katya left.' (McDonald 2024)

However, as shown in (68), *Katya* cannot be extracted from the adjunct and moved to the beginning of the sentence, despite the context containing a clear shifted topic.

(68) *[Katya]$_{TOP}$, tsi iehiatonhseraientáhkwa' iahá:ke' ohén:ton ne
Katya, tsi iehiatonhseraientahkwa' iah-a-k-e-' ohenton ne
Katya C library TRANS-FACT-1SGA-motion-PUNC before NE
aionhtén:ti'.
a-ion-ahtenti-'
OPT-FI.A-leave-PUNC
Intended: 'As for Katya, I went to the library before she left.' (McDonald 2024)

Similarly, relative clause islands also hold in Kanien'kéha. First, the example in (69) contains a simple example of a relative clause, marked with the complementizer *tsi*.

(69) **Context:** I'm going to a wedding and my sister wore a really pretty dress to a party that I want to steal.
Iahá:khawe' ne akià:tawi tsi niká:ien akhtsì:'a
iah-a-k-haw-e' ne akiatawi tsi nikaien ak-htsi-'a
TRANS-FACT-1SGA-take-PUNC NE dress C which FZSG>1SG-older.sibling-DIM
iakotstòn:ne.
iako-t-st-on-hne
FI.P-SRFL-use-STAT-REM.PST
'I took the dress that my sister wore.' (McDonald 2024)

However (just as the example in (68) demonstrates that it is impossible to extract a topic out of an adjunct), the example in (70) demonstrates that the same condition holds for relative clauses. In (70), *akhtsì:'a* cannot be coreferential with *iakotstòn:ne* in the embedded clause.

(70) *Akhtsì:'a, iahá:khawe' ne akià:tawi tsi niká:ien
ak-htsi-'a iah-a-k-haw-e' ne akiatawi tsi nikaien
FZSG>1SG-older.sibling-DIM TRANS-FACT-1SGA-take-PUNC NE dress C which
iakotstòn:ne.
iako-t-st-on-hne
FI.P-SRFL-use-STAT-REM.PST
Intended: 'As for my older sister, I took the dress that she wore.' (McDonald 2024)

Even when the context is modified as in (71) so that the older sister is named, it is still unacceptable to have a name adjoined high in the clause that is linked to an overt argument in the embedded clause.

(71) *Katya, iahá:khawe' ne akià:tawi tsi niká:ien iakotstòn:ne
Katya iah-a-k-haw-e' ne akiatawi tsi nikaien iako-t-st-on-hne
Katya TRANS-FACT-1SGA-take-PUNC NE dress C which FI.P-SRFL-use-STAT-REM.PST
ne akhtsì:'a.
ne ak-htsi-'a
NE FZSG>1SG-older.sibling-DIM
'Katya, I took the dress that she wore, my sister.' (McDonald 2024)

As a correction, the speaker offered (72), where *akhtsì:'a* is now the subject of the matrix clause, thus repairing the island violation.

(72) Akhtsì:'a ia'éhawe' ne akià:tawi tsi niká:ien
ak-htsi-'a i-a'-ie-haw-e' ne akiatawi tsi nikaien
FZSG>1SG-older.sibling-DIM TRANS-FACT-FI.A-take-PUNC NE dress C which
iakotstòn:ne.
iako-t-st-on-hne
FI.P-SRFL-use-STAT-REM.PST
'My older sister took the dress that she wore.' (McDonald 2024)

Given that the example of a left-periphery topic in Cayuga in (64) was preceded by *ne*, it is natural to wonder if any of these examples might be improved by adding *ne* before the intended external topic. However, the addition of *ne* to the ungrammatical example in (71) does not improve the grammaticality; it remains impossible for an external topic to be co-referential with an element inside an island (in this case, *Katya* cannot co-refer with *akhtsì:'a*).

(73) *Ne Katya, iahá:khawe' ne akià:tawi tsi niká:ien iakotstòn:ne
ne Katya iah-a-k-haw-e' ne akiatawi tsi nikaien iako-t-st-on-hne
NE Katya TRANS-FACT-1SGA-take-PUNC NE dress C which FI.P-SRFL-use-STAT-REM.PST
ne akhtsì:'a.
ne ak-htsi-'a
NE FZSG>1SG-older.sibling-DIM
Intended: 'Katya, I took the dress that she wore, my sister.' (McDonald 2024)

As a correction, the speaker offered (74), where both *ne akhtsì:'a* and *Katya* are now at the beginning of the sentence.

(74) Ne akhtsì:'a Katya, iakotstòn:ne ne iahá:khawe
ne ak-htsi-'a Katya iako-t-st-on-hne ne iah-a-k-haw-e'
NE FZSG>1SG-older.sibling-DIM Katya FI.P-SRFL-use-STAT-REM.PST NE TRANS-FACT-1SGA-take-PUNC
ne akià:tawi.
ne akiatawi
NE dress
'My older sister Katya, I took the dress that she wore.' (McDonald 2024)

These ungrammatical examples, taken together with the tenuous grammaticality of the sentences in (63) and (64), indicate that external topics are at least highly marked in Kanien'kéha, as they do not pass the island tests that left-dislocated topics do in Mayan languages. Therefore, I suggest that most topics in Kanien'kéha are not base-generated high-adjoined to the clause, but rather move from their original position in the sentence to a clause-internal topic position high in the left periphery.

6.4.3 Embedded topics

Another diagnostic that Aissen (1992) uses to distinguish external topics from internal topics is that external topics cannot be embedded. She takes this to mean that embedding verbs in Popti' and Tsotsil cannot take E, the head of the external topic phrase, as a complement (but they can take a CP complement). The ungrammaticality of embedding topics is shown in the following example from Tsotsil:

(75) a. Liyalbe li Xun-e ti taxtal li Petul-e.
he.told.me DET Xun-ENC COMP comes DET Petul-ENC

b. *Liyalbe li Xun-e ti a li Petul(-e) taxtal(-e).
he.told.me DET Xun-ENC COMP TOP DET Petul-ENC comes-ENC
'Xun told me that Petul was coming.' (Aissen 1992:68)

Similarly, it seems like topics are not able to be embedded in Kanien'kéha in the standard way, and speakers can use two different strategies to repair the violation.

Recall two clear examples of topics from Section 6.2, which contain both a topicalized and a focused constituent before the verb:

(76) [Riién:'a]$_{TOP}$ [okón:tshera']$_{FOC}$ enhihnínon'se', tánon
ri-ien-'a okon-tsher-a en-hi-hninon-'s-e', tánon
1SG>MSG-child-DIM paint FUT-1SG>MSG-buy-BEN-PUNC and
[kheién:'a]$_{TOP}$ [soccer ahthé:non]$_{FOC}$ enkhehnínonse'.
khe-ien-'a soccer ahtenon en-khe-hninon-'s-e'.
1SG>FI-child-DIM soccer ball FUT-1SG>FI-buy-BEN-PUNC
'For my son, I'll buy paint for him, and for my daughter, I'll buy a soccer ball for her.' (McDonald 2024)

(77) a. [Sak]$_{TOP}$ [kéntsion]$_{FOC}$ khok ì:ra'ks.
Sak kentsion khok i-ra-'k-s
Sak fish only EPEN-MSGA-eat-HAB
'Sak only eats fish.' (McDonald 2025)

When attempting to embed either of these sentences, it is impossible for the embedded clause to co-occur with *tsi* (a complementizer similar to 'that' in English, glossed as C throughout). One way that speakers fix this is by using the particle *ne* instead of *tsi*, or by not using a particle at all in between the embedded clause and the matrix clause.

(78)

Í:kehrhe'	tánon'	iah	tewakaterién:tare	(ne)	(*tsi)	[riién'a]$_{\text{TOP}}$	
i-k-ehrhe'	tanon'	iah	te-wak-aterientare	(ne)	tsi	ri-ien-'a	
EPEN-1SGA-think.STAT	and	NEG	NEG-1SGP-know.STAT	NE	C	1SG>MSG-child-DIM	
[okón:tshera']$_{\text{FOC}}$	enhihnínon'se',		tánon	[kheién:'a]$_{\text{TOP}}$		[soccer	
okon-tsher-a	en-hi-hninon-'s-e',		tánon	khe-ien-'a		soccer	
paint	FUT-1SG>MSG-buy-BEN-PUNC		and	1SG>FI-child-DIM		soccer	
ahthé:non]$_{\text{FOC}}$	enkhehnínon'se'.						
ahtenon	en-khe-hninon-'s-e'.						
ball	FUT-1SG>FI-buy-BEN-PUNC						

'I think, but I don't know, that for my son, I'll buy paint for him, and for my daughter, I'll buy a soccer ball for her.' (McDonald 2025)

(79)

Wakaterién:tare	(ne)	(*tsi)	[Sak]$_{\text{TOP}}$	[kéntsion]$_{\text{FOC}}$	khok	í:raks.
wak-aterientare	(ne)	tsi	Sak	kentsion	khok	i-ra-k-s
1SGP-know.STAT	NE	C	Sak	fish	only	EPEN

'I know for a fact that Sak only eats fish.' (McDonald 2025)

Another alternative structure for these sentences that is grammatical in Kanien'kéha is for *tsi* to occur after the topic. This is possible for both of the above sentences, as shown in the following two examples.

(80)

Í:kehrhe'	tánon'	iah	tewakaterién:tare	[riién:'a]$_{\text{TOP}}$	**tsi**
i-k-ehrhe'	tanon'	iah	te-wak-aterientare	ri-ien-'a	tsi
EPEN-1SGA-think.STAT	and	NEG	NEG-1SGP-know.STAT	1SG>MSG-child-DIM	C
[okón:tshera']$_{\text{FOC}}$	enhihnínon'se',		tánon	[kheién:'a]$_{\text{TOP}}$	[soccer
okon-tsher-a	en-hi-hninon-'s-e',		tánon	khe-ien-'a	soccer
paint	FUT-1SG>MSG-buy-BEN-PUNC		and	1SG>FI-child-DIM	soccer
ahthé:non]$_{\text{FOC}}$	enkhehnínon'se'.				
ahtenon	en-khe-hninon-'s-e'.				
ball	FUT-1SG>FI-buy-BEN-PUNC				

'I think, but I don't know, that for my son, I'll buy paint for him, and for my daughter, I'll buy a soccer ball for her.' (McDonald 2025)

(81)

Wakaterién:tare	[Sak]$_{\text{TOP}}$	**tsi**	[kéntsion]$_{\text{FOC}}$	khok	í:raks.
wak-aterientare	Sak	tsi	kentsion	khok	i-ra-k-s
1SGP-know.STAT	Sak	C	fish	only	EPEN

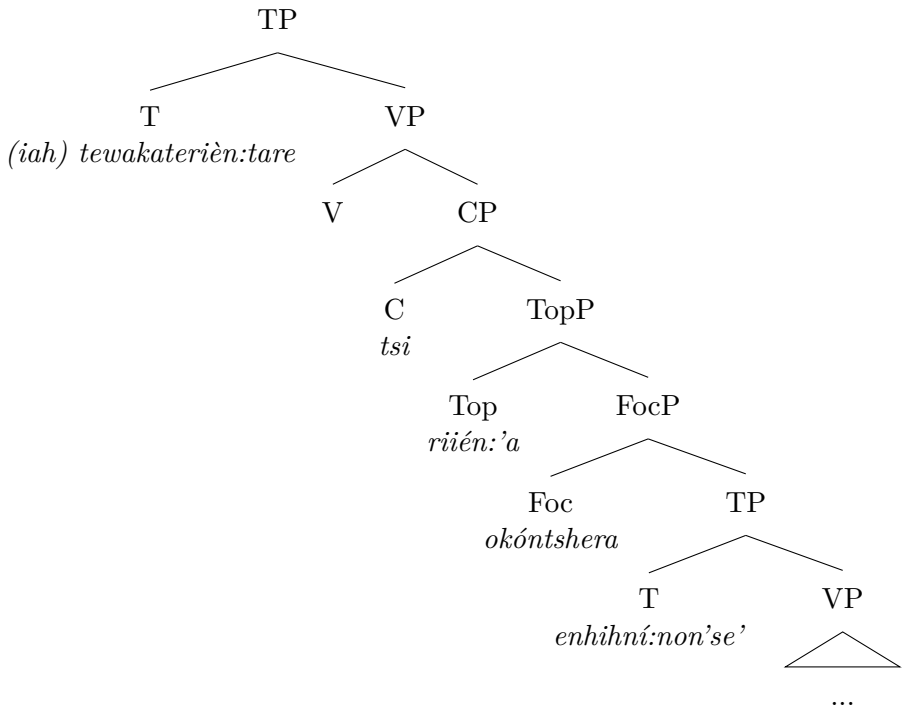
'I know for a fact that Sak only eats fish.' (McDonald 2025)

Evidence that these are still true embedded clauses comes from the agreement prefixes on the embedding verb. In (80), the embedding verb, *iah tewakaterièn:tare*, contains the first-person singular patient prefix *wak*, which cannot refer to *riién:'a* (the subject of the embedded clause)

since some sort of masculine agreement within the prefix would be needed if this were an argument. Additionally, *ne* would be expected to precede *rìién:'a* if this were an argument, since *ne* typically marks arguments that follow the verb. Equally, in (81), the same first-person singular prefix *wak* appears on the verb, which cannot be co-indexed with *Sak*. *Riién:'a* and *Sak* must therefore truly belong in the embedded clause, not in the matrix clause.

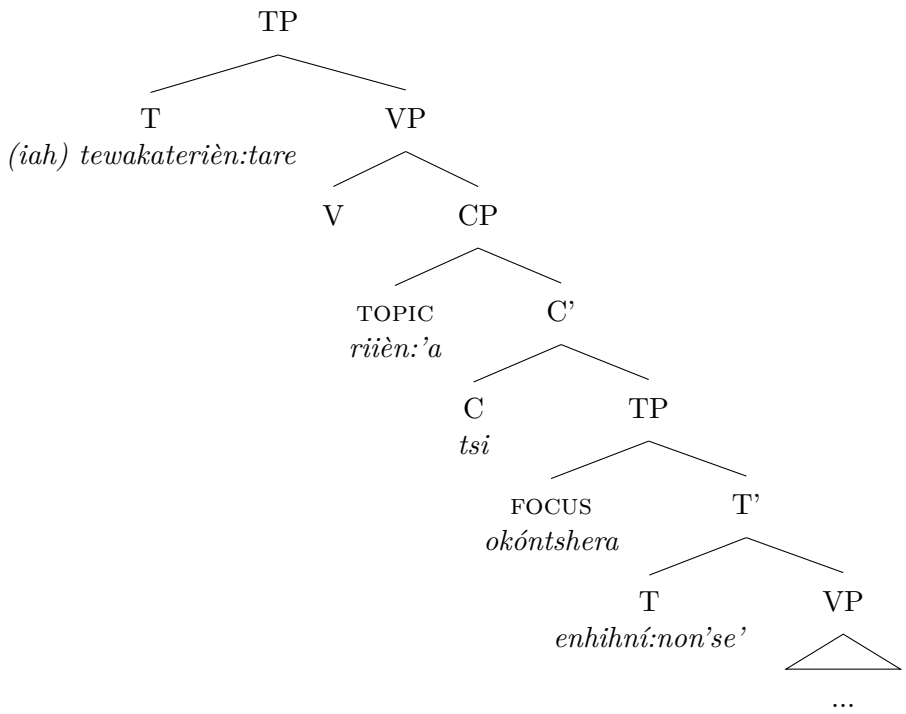
These two sentences constitute further evidence that topics in Kanien'kéha belong in Spec,CP. If Kanien'kéha had a dedicated topic position just below CP, as (for example) Rizzi (1997) proposes for Italian, then *tsi* should be able to precede the topic in the above sentences, but in fact this structure is ungrammatical. This is shown in the following impossible structure:

(82) *



However, the above examples have shown that this structure is impossible in Kanien'kéha, and that *tsi* can instead come after the topic (or *ne* can be used instead). This is therefore further evidence that topics do belong in Spec,CP, as the structure below illustrates:

(83)



The structure of the clauses that use *ne* instead of *tsi* remain a mystery. Perhaps these clauses are not embedded at all, but adjoined to the sentence somehow, or a completely separate sentence (and this is a cleft-like usage of *ne*). I leave this puzzle for future work.

Ultimately, unlike Mayan, embedding sentences with topics in Kanien'kéha is not completely ungrammatical. This indicates that most topics are not clause-external in Kanien'kéha, since they are able to be embedded as long as either *ne* is used in place of *tsi* or *tsi* comes after the topic. The fact that *tsi* can come after the embedded topic is also one piece of conclusive evidence that topics do belong in Spec,CP, rather than in a dedicated TopP position below CP.

6.5 Topics and *wh*-words

Further evidence that topics belong in Spec,CP (and focus and *wh*-words belong in Spec,TP) comes from the fact that topics can occur before *wh*-words. If the previous section is indeed evidence that topics belong in Spec,CP, then the fact that they can occur before *wh*-words in questions indicates that focus and *wh*-words do belong in a lower position (i.e. Spec,TP).

The following examples display topics occurring outside of *wh*-words. In (84), the subject *sa'nisténha* is topicalized (as indicated by the topic-shift context) and can appear before the *wh*-word *nahò:ten*.

(84) **Context:** Everyone in your friend's family went on a shopping spree, and you're asking what each of them bought. You first ask about what her father bought, and next you ask about her mother.

a. Sa'nisténha, nahò:ten wa'ehní:non'?
sa-'nistenha nahoten wa'-ie-hninon-'
FZSG>2SG-mother what FACT-FI.A-buy-PUNC
'Your mother, what did she buy?' (McDonald 2025)

Similarly, (85) also contains a shifted topic that can occur before the *wh*-word *nahò:ten*; in this case, the indirect object *Chase* is topicalized.

(85) **Context:** Many of your friends have birthdays coming up, so you have to get gifts for all of them. First I ask you about your friend Jen, and next I ask about Chase.

a. Chase, nahò:ten énhtsion' ki iehsóhe?
Chase nahoten en-hts-ion-' ki iesohe
Chase what FUT-2SG>MSG-give-PUNC this birthday
'Chase, what kind of gift are you going to get him? (McDonald 2025)

While more data would be ideal to determine whether this topicalization can occur with all types of *wh*-questions, the above two examples provide a good baseline and lend further evidence to the idea that topics belong in Spec,CP while focus and *wh*-words belong in Spec,TP.

6.6 Right-dislocation (antitopics)

A puzzle remains regarding the possibility of dislocating arguments in Kanienkéha. The majority of this work has argued for an analysis in which overt nouns in Kanien'kéha start out in argument positions and may move to dedicated topic and focus positions in the left periphery depending on information structural factors. This is incompatible with Baker (1996)'s analysis, which argues that all arguments in Kanien'kéha are essentially dislocated, adjoined high in the clause and able to move around freely, explaining the "free" word order phenomena. However, I leave open the possibility that *some* arguments can indeed be dislocated, as Baker argues is true for all nominals. I have not found much evidence for left-dislocation (besides some potential prosodic cues, described in Section 7), given that topics in Kanien'kéha don't conform to any of Aissen (1992)'s syntactic diagnostics for external topics. However, it does appear possible to right-dislocate constituents in the language.

While the right periphery of the clause is not particularly well understood, this section will provide preliminary evidence that constituents can be right-dislocated in Kanien'kéha, particularly prevalent with subjects (thus deriving VOS order).

Kanien'kéha has been described as having a particular type of construction known as antitopics, a term first coined by Chafe (1976) and further investigated in Kanien'kéha by Mithun (2015) and Mithun (2020). Mithun claims that antitopics always appear at the end of a sentence, preceded by the particle *ne*, and they affirm that the ongoing topic of conversation is still the topic. One example of this is shown in (86); in this case, the right-dislocated topic serves to confirm that a question is being asked about *O'nahsakén:ra*, who had presumably already been established at some point as a topic of conversation.

(86) Tó: nihowiraién:táhkwe', [ne O'nahsakén:ra]$_{\text{ANTITOP}}$?
to ni-ro-wir-a-ien-ta-hkwe' ne O'nahsakenra
how.many PART-MSGP-baby-JR-have-HAB-FORM.PST NE O'nahsakenra
'How many children did he have, (the aforementioned) O'nahskén:ra?' (Mithun 2020:38)

Mithun (2020) also claims that antitopics have a distinct prosody, characterized by a pause (as indicated by the comma) and a decrease in pitch. She argues that this difference in prosody distinguishes antitopics from regular constructions in which an unincorporable or 'excorporated' theme simply appears after the verb, followed by *ne*.

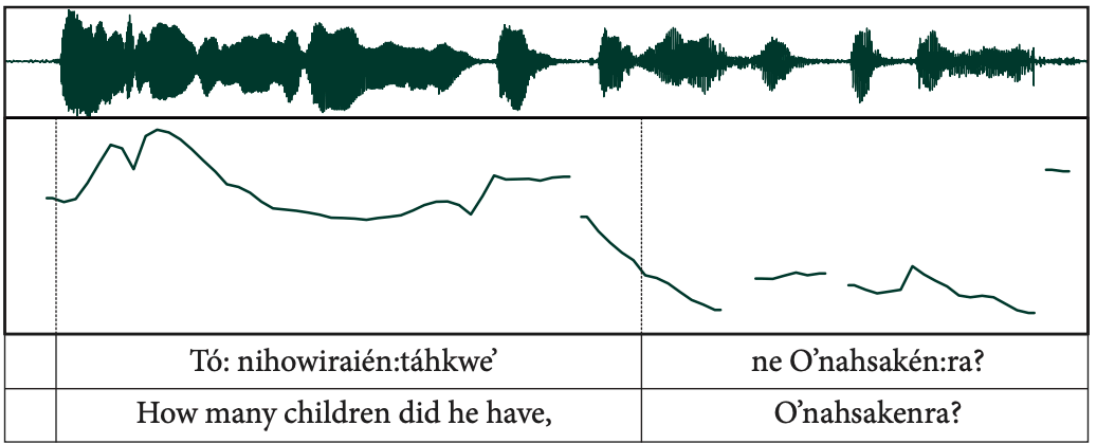


Figure 3: Antitopic (Mithun 2020:38, K.)

However, this pitch track does not seem to show a very clear pause; if it is present, it is much smaller than either of the two examples of pauses that Mithun (2020) shows for topic shift (shown in Section 7). Additionally, the fact that antitopics are marked by *ne* is not necessarily significant; any time an argument appears after the verb, it is most naturally marked by *ne*. It may therefore be the case that these constructions are actually in-situ arguments, and they remain in their original locations after the verb because they are given (as described by Krifka (2008)) and therefore do not require movement to the left periphery. They could also be thought of as an "afterthought" as they always refer back to a topic that has been previously mentioned in the discourse, and they are always marked by the particle *ne*, which (among its many functions) is usually used before a referent or idea that has already been mentioned. Therefore, while Mithun (2020)'s description indicates that right-dislocation is likely possible in Kanien'kéha, right-dislocated constituents are hard to distinguish from regular in-situ or "excorporated" arguments.

I have found a handful of examples from the stories in Williams 1976 that could potentially be analyzed as antitopics. The main indications that these could be antitopics is that they are preceded by *ne*, and are sometimes set off from the preceding part of the sentence by a comma indicating a pause.

For example, the following sentence is from a story about *iakotineniói'a'ks* (or 'little people'). The previous sentences of the story detail the main character, Katsi'tsaró:roks, coming across a family of little people after falling asleep. In (87), *iakotineniói'a'ks* is preceded by *ne* and set off from the rest of the sentence by a comma. The little people had been mentioned multiple times already in the story, so it would be reasonable to propose that this is a dislocated *ne*-marked constituent, reaffirming that the ongoing topic (*iakotineniói'a'ks*) is still the topic.

(87) Katsi'tsaró:roks o'nisténha iotká:te' ronwatikaratón:nis ne
Katsi'tsaroroks o-'nistenha iotkate' ronwati-karaton-ni-s ne
Gathering.Flowers FZSG>FZSG-mother often FI>MPL-tell.stories-BEN-HAB NE
ronwatiien'okón:'a, ne iakotineniói'a'ks.
ronwati-ien'-okon'a ne iakoti-neni-ioia'k-s
FI>MPL-child-PL NE FZPL>FI-stone-throw-HAB
'Gathering Flowers' mother had often told the children stories about the little people.'
(Kaieríthon 1976a, K.)

An alternative translation for this sentence emphasizing the antitopic/afterthought-like construction could be 'Gathering Flowers' mother had often told the children stories about them, the little people.'

Similarly, the following example also contains a postverbal constituent (the subject in this case) marked by *ne*. While the Kanien'kéha text does not contain a comma, the free translation into English strongly indicates an antitopic construction.

(88)

Kháre'	ó:nen	ki'	khé'	ákta'	rotihtharonnóntie'		ne	kí:ken	ohná:ken'
khare	onen	ki'	khe'	akta'	roti-htharonn-on-tie'		ne	kiken	ohnaken
finally	now	EMPH	close	near	MPLP-talk-STAT-PROG		NE	this	behind

tahón:ne'.
t-a-honn-e-'
CIS-FACT-MPLA-motion-PUNC

'Finally, now, they were close by and they were speaking, this group that was behind.'

(Natawe 1976, K.)

The possibility of right-dislocation in Kanien'kéha is appealing for my analysis given that it provides a relatively simple way of deriving VOS order. VOS could also be derived by topicalizing the verb and focusing the object, but it is difficult to imagine contexts where this construction would be appropriate, and in most of the examples of antitopics that I have seen, the antitopic is usually the subject. However, antitopics have proven difficult to test in Kanien'kéha, given that they tend to appear more frequently in conversational discourse than in narratives or elicited speech (Mithun 2020), and because (as previously mentioned) they can be hard to distinguish from regular, *ne*-marked in-situ arguments. While Mithun (2020) mentions pauses and pitch decreases as potential diagnostics, there doesn't seem to be a clear pause in the pitch track that she provides, and the potential antitopics in (87) and (88) weren't produced with a particularly distinct prosody when speakers were asked to read them.

Further research on antitopics would ideally address some of Aissen (1992)'s diagnostics for external topics but for the right periphery, such as island effects. For example, in other languages that display right-dislocation phenomena such as French, right-dislocated constituents can be separated from the clause by an adjunct island (López 2014). It would also be helpful to find a wider range of examples of antitopics from natural Kanien'kéha discourse, investigating both their prosody as well as the surrounding context, so that there are more than just a handful of examples in isolation. I leave this for future work.

7 Prosody

This section briefly explores the prosodic differences between topicalized and focused constructions in Kanien'kéha, ultimately arguing that the prosodic differences between them mirrors the structural differences.

7.1 Focus prosody

Preliminary investigations of prosody show that Kanien'kéha focus constructions have their own prosody, distinct from both neutral clauses and topic constructions. In general, the focused constituent is accentuated; the pitch and length of the stressed syllables of a focused word are distinct from those in neutral contexts.

I am not the first to claim that focus constructions have a distinct intonational contour. Feurer (1976), in an investigation of question and answer constructions in Kanien'kéha, claims that focus constructions are marked with a particularly emphasized stress assignment. While she does not provide pitch tracks, she notes that when an element is focused, it receives emphatic stress and is subsequently moved to the front of the utterance, with an interval between the focus and the rest of the clause further reinforcing the stress assignment on the surface. I have not found that foci are followed by an interval, but the intuition about emphatic stress assignment does seem to hold up, as shown below.

More recently, Mithun (2020) has used pitch tracks to look at information structurally-marked sentences. She notes that in general, pitch in Kanien'kéha sentences declines gradually throughout the sentence (even in questions; there is no rise in intonation at the end of a question as there is in English). However, she examines one example of a focus construction, and observes that the downstress on *Kahnawà:ke* is particularly emphasized in the answer to the question (where the downstress on *Kahnawà:ke* is less pronounced):

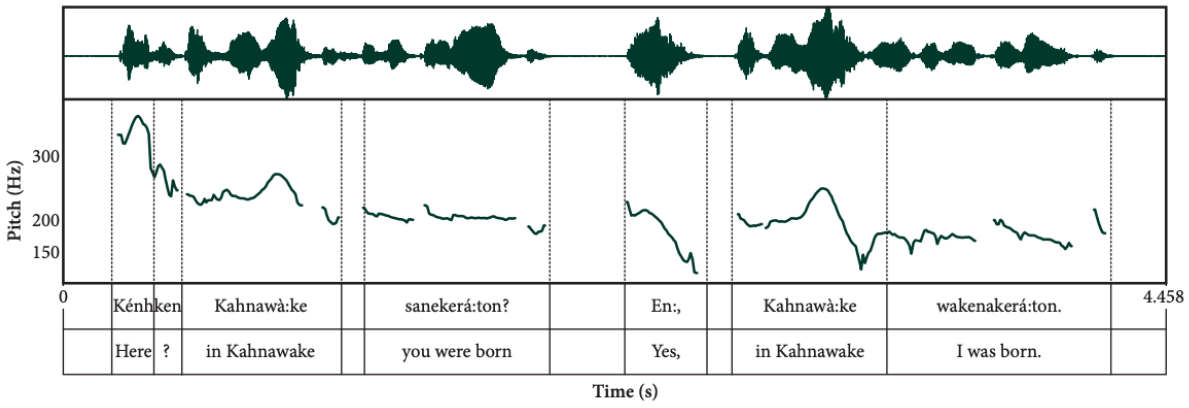


Figure 4: Downstress focus (Mithun 2020:36, K.)

It looks like a similar pattern holds for other types of stress in Kanien'kéha. There are three kinds of stress: short stress, long upstress, and downstress; stress usually falls on the penultimate syllable. It surfaces as a short stress on a closed syllable, and as a long stress on an open syllable. Finally, when the stress falls on a vowel before ʔ or *h*, the vowel lengthens and surfaces with a falling tone (Michelson 1988). This third stress is the one shown in Figure 4; it is usually characterized by a slight rise and then a sharp fall in pitch.

The following pitch tracks show recordings of some of the information focus constructions in

Section 3.2. The following two pitch tracks are both from recordings of subject focus, but one subject (*Á:nen*) has a long upstress, while the other (*Wíshe*) has a short stress. First, when *Á:nen* is focused, the long vowel looks particularly drawn out, as shown in Figure 5:

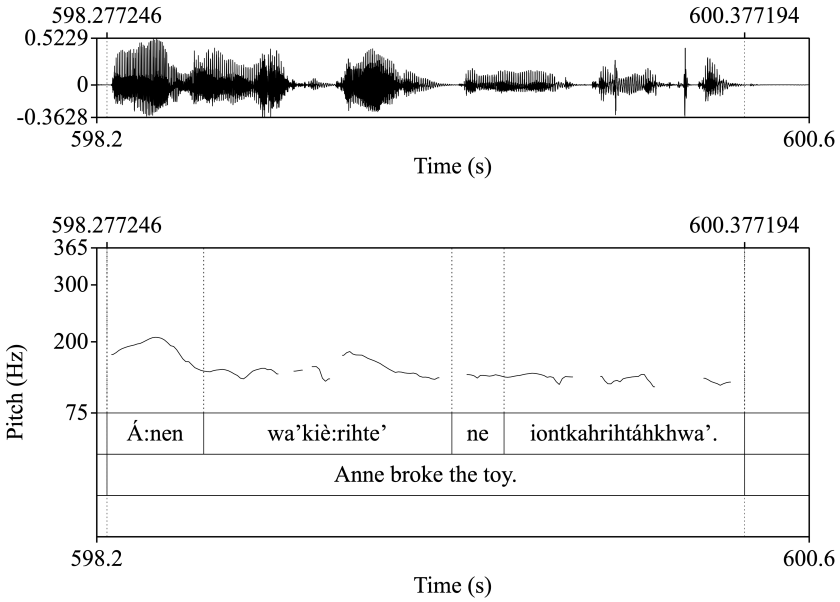


Figure 5: Long upstress focus (McDonald 2024)

Next, the short stress on *Wíshe* when focused also shows a slight accentuation; the pitch spikes quite a bit on the stressed vowel, more so than the short stress on a non-emphasized word would (this can be compared to the short stress on *iontkahrihtáhkhwa'* in Figures 5 and 6, which shows a much more subtle raise in pitch).

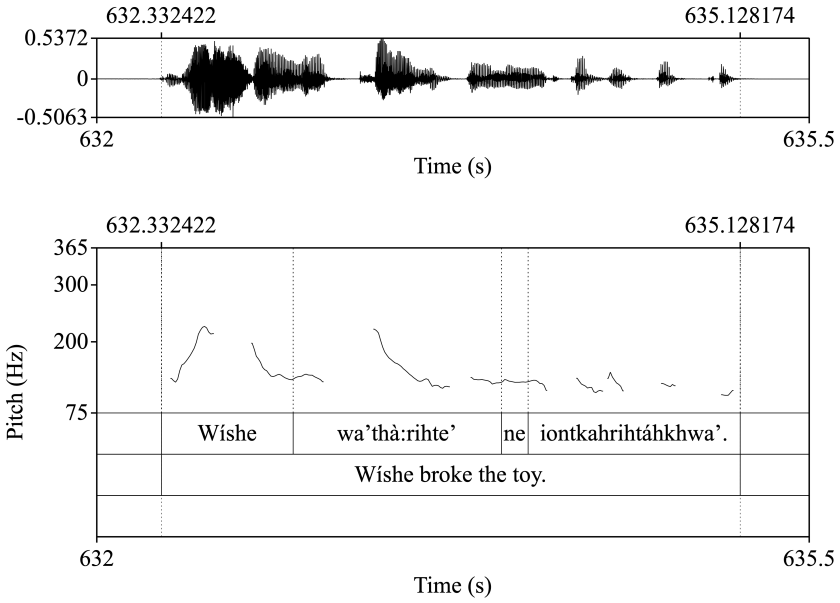


Figure 6: Short stress subject focus (McDonald 2024)

Overall, these data confirm the observations in Feurer (1976) and Mithun (2020) that focused

constituents are accentuated in Kanien'kéha.

7.2 Topic prosody

Topics also tend to have prosody that is distinct from neutral sentences. Cross-linguistically, topics (particularly left-dislocated topics) are often followed by a pause. The commas after the shifted topic examples in Section 6.3 indicate that this is true of Kanien'kéha, and indeed Mithun (2020) claims that topics in Kanien'kéha are characteristically followed by a pause. She looks specifically at two examples of shifted topics, claiming that they are followed by a brief pause and then a pitch reset at the beginning of the rest of the clause. This is shown in Figures 7 and 8 below:

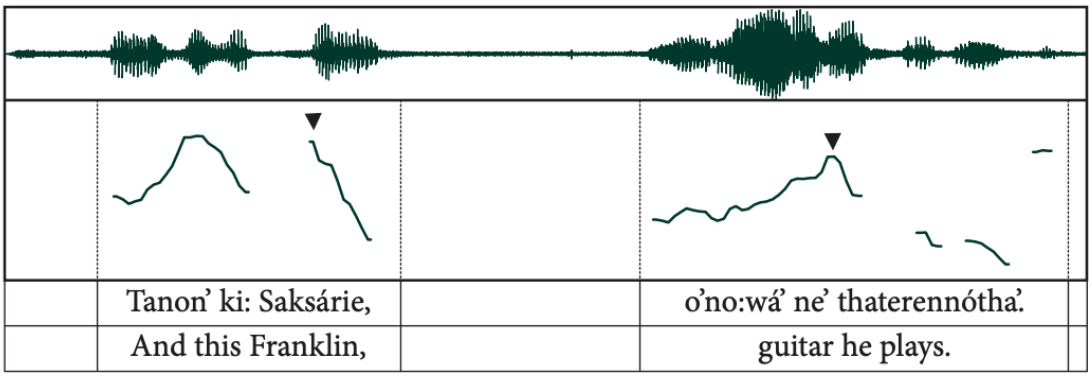


Figure 7: Topic shift (Mithun 2020:34, K.)

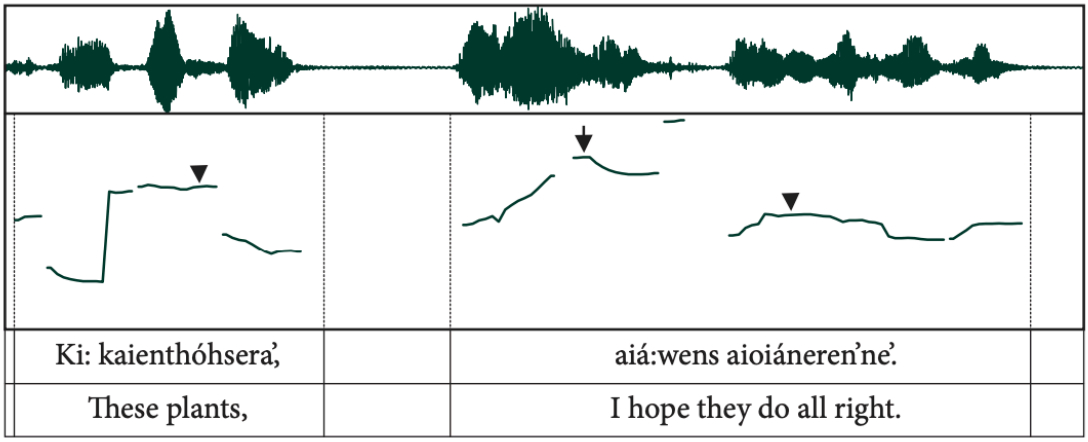


Figure 8: Topic shift 2 (Mithun 2020:33, K.)

This is also confirmed independently in my data. Specifically, when passages were read from some of the stories in *Kanien'kéha Okara'shón:'a*, the potential examples of topic shift from Section 6.3 which were followed by a comma were indeed followed by a pause. The pitch track for the sentence in (89) is shown in Figure 9:

(89) a. Akte' nonsakaié:ra'te' tsi ronaterí:io, wahontkwé:ni'.
'The battle turned and they were victorious.'

b. [Tharonhiawá:kon]$_{\text{TOP}}$, wahshako'nikonhráta' ne Tekanawíta, tánon'
Tharonhiawakon wa-hshako-'nikonhr-a-t-a' ne Tekanawita tanon'
Tharonhiawakon FACT-MSG>MPL-mind-JR-be.in-PUNC NE Tekanawi:ta and
Aié:wate' nahianitiohkón:ni' ne Kaianere'kó:wa.
Aiewate' n-a-hi-an-itiohk-onni-' ne Ka-ianere-'kowa
Hiawatha PART-FACT-MDUA-SRFL-group-make-PUNC NE N.A-good-big
'Tharonhiawa:kon, he inspired Tekanawi:ta, who was the founder of the League of Peace (League of the Iroquois).' (Kaieríthon 1976d, K.)

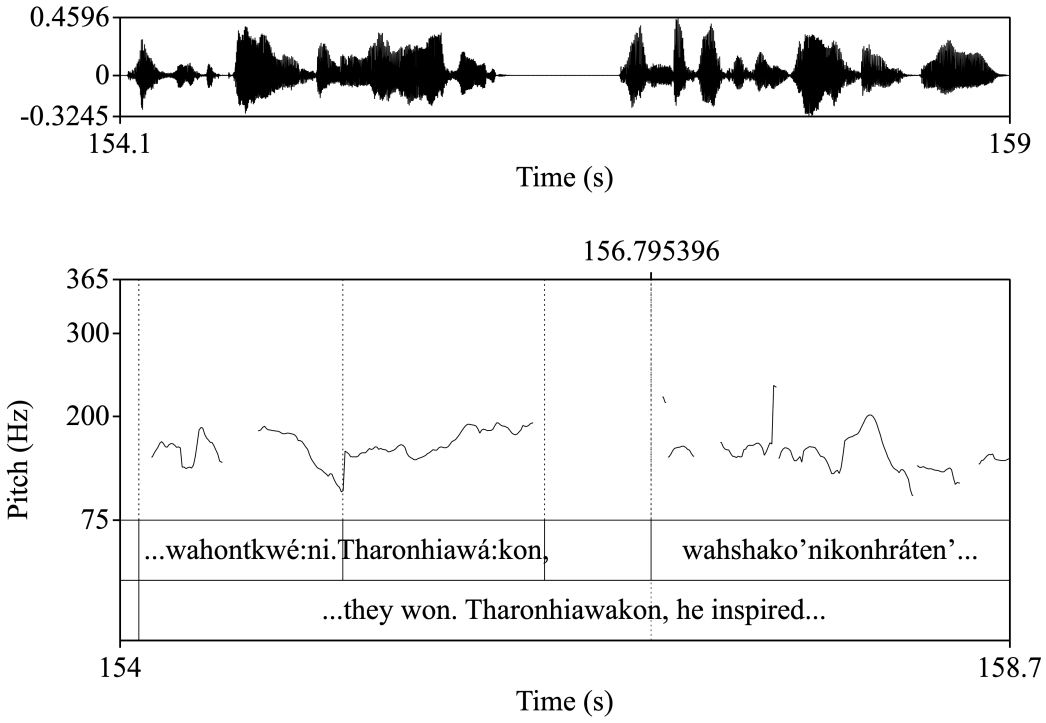


Figure 9: Topic shift 3 (McDonald 2024)

However, unlike topic shifts, examples of contrastive topics do not seem to be followed by a significant pause. This is shown in a recording of the sentence in (90) below; there are no pauses after *riién:'a* and *kheién:'a*.

(90) [Riién:'a]$_{\text{TOP}}$ [athé:non]$_{\text{FOC}}$ enhí:ion', tánon [kheién:'a]$_{\text{TOP}}$
ri-ien-'a athenon en-hi-ion-', tánon khe-ien-'a
1SG>MSG-child-DIM ball FUT-1SG>MSG-get-PUNC and 1SG>FI-child-DIM
[okóntshera']$_{\text{FOC}}$ enkhé:ion'.
okontshera en-khe-ion-'.
paint FUT-1SG>FI-get-PUNC
'For my son, I'll buy a ball, and for my daughter, I'll buy paint.' (McDonald 2024)

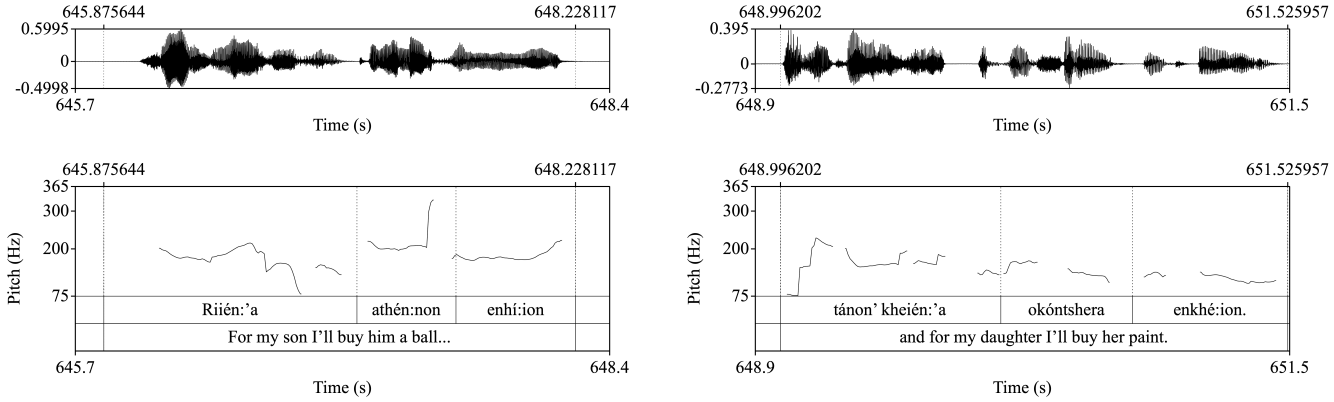


Figure 10: Contrastive topic prosody (McDonald 2024)

A common diagnostic for the difference between internal and external topics (as discussed in Section 6) is pauses. Aissen (1992), Legate (2001), and Velleman (2014) all argue that external (or left-dislocated) topics are followed by a clear intonational phrase boundary, usually realized as an audible pause, while internal topics which move and bind a trace are generally not followed by this intonational phrase boundary. The difference in pauses between contrastive topics and topic shifts in Kanien'kéha could therefore potentially indicate that shifted topics are left-dislocated and adjoined high in the clause, while contrastive topics are generated via movement to Spec,CP. However, while differences between internal and external topics are further elucidated in both K'ichee' and Warlpiri by morphosyntactic features such as different verb forms, clitic clusters, and topic and focus particles (Legate 2001, Velleman 2014), I have found no such morphosyntactic differences in Kanien'kéha; pauses are thus far the only visible difference. I therefore leave this as a puzzle for future work.

The important takeaway from this section is that, in addition to the syntactic differences between topicalized and focused constituents discussed in Sections 5 and 6, the two constructions also show clear prosodic differences. Topic shifts are indicated by pauses, while focus constructions are indicated by accentuated intonation on the stressed syllable of the focused constituent. Once again, this is a difference that Baker (1996) would not expect if all nouns were high-adjoined to the clause; the difference in prosody suggests a difference in structure.

8 Conclusion

8.1 Summary

In this thesis, I have shown that information structure plays a crucial role in determining the syntax of Kanien'kéha. Specifically, I have argued that the base word order in this language is VSO, and that anytime a constituent appears before the verb, it is either topicalized or focused. There are two information-structurally motivated positions high in the clause, one in Spec,TP for focus and the other in Spec,CP for topic. Topic and focus can co-occur, motivating two separate positions. Finally, prosodic data also provides evidence for a distinction between topics and foci, with topic shifts being set off from the rest of the clause by an intonational break while foci are marked with particularly emphatic stress on the accented syllable of the focused constituent.

This proposal argues against DeCaire et al. (2017)'s claim that there is only one preverbal position in Kanien'kéha; given that topics and foci can co-occur, there must in fact be at least two. I have also provided evidence against Baker (1996)'s Polysynthesis Parameter; if all overt nominals were truly adjoined high in the clause, there should be no structural or prosodic differences between topics and foci in Kanien'kéha. A requirement that all overt nominals be freely-ordered high-adjoined adjuncts (as required by the MVC) does not easily capture these patterns. Other works have pointed out problems with or alternatives to the MVC and the Polysynthesis Parameter in general based on other syntactic facts about Kanien'kéha, such as agreement patterns with inanimate arguments (Coon 2025), noun incorporation (DeCaire et al. 2017, Boles 2024), and Condition C effects (Boles in prep).

My account successfully derives all six grammatical word orders in Kanien'kéha. I argue that VSO is the basic word order, since V always raises to T and the two arguments are either *pro*-dropped or remain in situ. SVO and OVS can both be derived by either focus or topicalization of the subject or object. SOV and OSV occur in constructions that have both a topic and a focus; either the subject is the topic and the object is the focus (SOV) or the object is the topic and the subject is the focus (OSV). Finally, VOS can be derived through either topicalization of the verb and focus of the object, or through antitopicalization/right-dislocation of the subject to an adjoined right-periphery position.

8.2 Avenues for future research

There are several areas of this thesis that could be further elucidated with more data. The right periphery is one such area; there is much that remains to be discovered about the nature of antitopics and whether they belong in a dedicated syntactic position or are simply in-situ nominals. Further data from natural conversations might be helpful to learn more about these constructions, which may not appear as often in formal elicitation contexts or in narratives. A fuller analysis of *ne*, including the potential prosodic differences between different types of *ne*, would also be useful both in learning more about the status of antitopics as well as the potential cleft-like uses of *ne* and how this could relate to exhaustive focus.

Due to time and space constraints, the section on prosody in this thesis is unfortunately short, with only a handful of pitch tracks given for both focus and topicalization constructions. This research would therefore benefit greatly from more recordings and prosodic analyses, especially from a broader range of speakers and dialects.

One type of data is conspicuously absent from the data included in this thesis, and that is data from natural Kanien'kéha speech (as opposed to narratives and elicited speech). As previously mentioned, more data from conversations would be especially useful for finding potential antitopic constructions, and data of this type would be ideal for learning more about information structure

in general; the word order patterns discussed in Section 4 could be completely different in natural speech as compared to written narratives.

Finally, the exact nature of the syntactic positions of topic and focus has been left intentionally a bit vague. I have argued that these topic and focus belong in Spec,CP and Spec,TP, respectively, but it is compatible with my data that focused items moved to a designated focus position such as FocP (Rizzi 1997, 2004); based on embedded clause data, however, it is less likely that topics move to a dedicated topic position such as TopP. I agree with DeCaire et al. (2017) that there does not seem to be any syntactic data that would directly point to a focus-specific position. Based on the Mirror Principle and other evidence from morphological word-building, I have argued that the verb moves up to T and stays there barring further information structurally motivated movement. Further, given that there is no evidence for an EPP feature in Kanien'kéha, this leaves the position in Spec,TP open, and I have suggested that this is the position for focus. And since topics can co-occur with foci and consistently appear before them, it follows that they belong immediately above foci in Spec,CP. I have therefore decided to stick with the more general TP and CP labels, but further research could elucidate different dedicated positions.

I have argued overall that the "free" word order phenomena in Kanien'kéha is in fact unremarkable, and can be accounted for by relying on standard cross-linguistic assumptions about topic and focus movement.

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A Summary of word order patterns

This appendix is intended to be a much briefer, more accessible explanation of word order patterns in Kanien'kéha for second-language learners who might not be interested in the more technical aspects of information structure.

A.1 Introduction

- Kanien'kéha has "free" word order. This means that the subject, verb, and object in a Kanien'kéha sentence can go in any order and the sentence will still be understandable
- However, there are still rules that govern where the words go in a sentence; when a speaker talks, they're still going to have to choose which words they want to put first
- **Information structure** refers to how this choice is made
- There are three main components of information structure: **focus**, **topic** and **givenness**

A.2 Focus

- The **focus** of a sentence is the word(s) that provide new information; it can be thought of as what makes the sentence interesting
- The focus of a sentence can be contrasted with the **background**, which refers to information that the speaker and the addressee already know
- In English, focus can be expressed through intonation; there is a particular stress that English speakers tend to place on the word that is focused
- In the following examples, small caps indicates the emphasis that English speakers naturally place on the focused word

(91) a. What is Wári making?
b. She's making PASTA.

(92) a. Who's making pasta?
b. WÁRI is making pasta.

- If the stress is placed on a word that is not under focus, the sentence sounds strange (indicated by the # symbol).

(93) a. What is Wári making?
b. #SHE'S making pasta.

(94) a. Who's making pasta?

b. #Wári's making PASTA.

- In Kanien'kéha, the word order does the work that intonation does in English. The focused element in the sentence is said first.

(95) a. Nahò:ten wa'thá:rihte'?
'What did he break?'

b. **Iontkahri'táhkwa'** wa'thá:rihte'.
'He broke the TOY.'

(96) a. Ónhka wa'kié:rihte' ne iontkahri'táhkwa'?
'Who broke the toy?'

b. **Ráonha** wa'thá:rihte' ne iontkahri'táhkwa'.
'HE broke the toy.'

- Notice that in (96b), the independent pronoun *ráonha* is used
- These independent pronouns are often used for emphasis, and one of the most common places they are used is in focus constructions
- Speakers also tend to produce the above sentences with a particular intonation; the accent on *iontkahri'táhkwa'* in (95b) and the accent on *ráonha* in (96b) tend to be particularly pronounced
- And similarly to the above English examples, if you mix up the answers to these two questions, they would sound strange:

(97) a. Nahò:ten wa'thá:rihte'?
'What did he break?'

b. #**Ráonha** wa'thá:rihte' ne iontkahri'táhkwa'.
'HE broke the toy.'

(98) a. Ónhka wa'kié:rihte' ne iontkahri'táhkwa'?
'Who broke the toy?'

b. #**Iontkahri'táhkwa'** wa'thá:rihte'.
'He broke the TOY.'

A.3 Topic

- Next, another aspect of information structure that can affect word order in Kanien'kéha is **topic**
- Topic is not well-defined, but it can be loosely equated to 'what the sentence is about'
- Topics tend to be initial, so a speaker will introduce a topic, and then the rest of the sentence will make a comment about that topic
- **Topic shift** occurs when a speaker shifts the topic of conversation to a different topic
- English doesn't have a dedicated way of expressing topic, although topics in other languages are often translated into English using the phrase 'as for...'
- For example, the following sentence shows a typical topic shift construction:

(99) **Context:** I'm talking about the languages that my parents spoke when they were growing up. I've first been talking about my mom, who grew up speaking English, and then I want to shift the topic of conversation to my dad.

a. As for [my dad]$_{\text{TOP}}$, he grew up speaking Spanish.

- Here, the topic is *my dad*, and the comment is that he grew up speaking Spanish
- In Kanien'kéha, topics also tend to be initial
- This makes them hard to distinguish from focus, but there are two potential ways to tell them apart: context and prosody
- In the following example from the story *Tharonhiawá:kon* in *Kanien'kéha Okara'shón:'a*, the preceding lines are discussing a big battle, and the conclusion of that battle
- The next line shifts the topic to *Tharonhiawá:kon*, the main character of the story
- Another clue that *Tharonhiawá:kon* is the topic comes from the comma after the word; shifted topics in Kanien'kéha are often followed by a pause separating the topic from the comment, indicated by a comma when these sentences are written down

(100) a. Ákte' nonsakaié:ra'te' tsi ronaterí:io, wahontkwé:ni'.
'The battle turned and they were victorious.'

b. [Tharonhiawá:kon]$_{\text{TOP}}$, wahshako'nikonhráta ne Tekanawíta, tánon Aié:wate' nahianitiohkón:ni ne Kaniare'kó:wa.
'(As for) Tharonhiawá:kon, he inspired Tekanawí:ta and Aié:wate', who were the founders of the League of Peace.'

- Finally, topic and focus can also co-occur in the same sentence in Kanien'kéha
- When this happens, the topic always comes before the focus

- The following example is also a different subtype of topic, **contrastive topic**, where one topic is contrasted with another one in the same sentence or two sentences that are right next to each other

(101) a. Q: What gifts are you going to get your son and daughter?

b. A: [Riién:'a]$_{\text{TOP}}$ [okòn:tshera']$_{\text{FOC}}$ enhihní:non'se', tánon' [kheièn:'a]$_{\text{TOP}}$ [soccer ahthé:non]$_{\text{FOC}}$ enkhehní:non'se'.
'As for [my son]$_{\text{TOP}}$, I'll buy him [paint]$_{\text{FOC}}$, and as for [my daughter]$_{\text{TOP}}$, I'll buy her [a soccer ball]$_{\text{FOC}}$.

- Notice that in constructions where topic and focus co-occur in the same sentence, the topic comes before the focus, which itself comes before the verb
- Here is a simple visual for information structure in Kanien'kéha:

(102) [Topic [Focus [Verb]]]

- Essentially, this means that anytime a word comes before the verb, it's either topicalized or focused
- This is in line with speakers' general intuition that "whatever is most important comes first." Most often, this corresponds to the **focus** of the sentence; the focused, or most important/interesting, element of the sentence should be initial
- But topic can also affect word order; when a speaker is changing the topic of conversation, or contrasting two topics with each other, these will be initial
- And in the rare instances where topic and foci co-occur, topics come before foci, which in turn comes before the verb (as shown in the visual above).

A.4 Givenness/antitopic

- The last aspect of information structure that can affect word order is **givenness**
- This refers to information that is already known to the participants of a conversation
- Languages can "deaccent" given information, marking it as unimportant in some way
- This can take the form of deleting the information entirely, mumbling or pronouncing it quietly, or moving it to the end of a sentence
- In Kanien'kéha, information that is already known to the speaker can be moved to the end of the sentence in a construction sometimes called **antitopic**
- Antitopics are usually preceded by a pause (indicated by a comma when written, like topic shifts) and always preceded by *ne*

- One example of an antitopic is shown below. This is an example from a conversation, where the name *O'nahsakén:ra* had been previously mentioned, and the speaker is reaffirming that they are asking the question about him:

(103) Tó: nihowiraién:táhkwe', [ne O'nahsakén:ra]$_{\text{ANTITOP}}$?
'How many children did he have, (the aforementioned) O'nahskén:ra?' (Mithun 2020:38)

- In summary, the following diagram gives a full picture of what information structure looks like in Kanien'kéha:

(104) [Topic [Focus [Verb]]] [Anttiopic]