

# INTERACTION OF NEGATION AND MODALITY IN KAN IEN'KÉHA



KATYA MORGUNOVA  
katya.morgunova@mail.mcgill.ca  
McGill University



## INTRODUCTION

- Negation in Kanien'kéha is bipartite; it obligatorily involves the particle *iah* and negative prefix *te-/th-* on the verb.
- In the Iroquoianist literature (Koenig & Michelson 2020), negation is reported to be incompatible with **factual** and **future** modal prefixes. To express negative statements for these forms, negative version of predicates with different TAM markers are used.

- (1) a. \**iah th-wa'-w-atawen'*  
NEG NEG-FACT-FZ.SG.A-swim-PFV  
Int.: 'She didn't swim.'  
b. *iah te-io-atawen*  
NEG NEG-FZ.SG.P-swim-PERF  
'She didn't swim.'
- (2) a. \**iah th-en-w-atá:wen'*  
NEG NEG-FUT-FZ.SG.A-swim-PFV  
Int.: 'She won't swim.'  
b. *iah th-a-w-atá:wen'*  
NEG NEG-OPT-FZ.SG.A-swim-PFV  
'She won't swim.'

### Empirical contribution

- I present the data that shows that this generalization is not accurate.
- Instead, I argue that negation is incompatible with **factual forms with past perfective interpretation and future**.

### Theoretical contribution

- I show that this incompatibility must arise semantically, rather than morphologically.
- This incompatibility could stem from the semantics of certainty associated with both past perfective and future forms.

## BACKGROUND

- Kanien'kéha verbs generally exhibit a three-way aspectual contrast:

- (3) a. *wa'-ra-rast'*                      b. *ra-rast-ha'*                      c. *ro-rast-on*  
FACT-M.SG.draw-PFV                      M.SG.draw-IPFV                      M.SG.P.draw-PERF  
'He drew.'                      'He draws.'                      'He draws.'

- Unlike imperfective and perfect aspects, perfective **requires** the presence of one of the modal prefixes: factual, future or habitual.

- (4) a. \**ra-rast-e'*                      c. *en-ra-rast-e'*  
M.SG.A.draw-PFV                      FUT-M.SG.A.draw-PFV  
Int.: 'He draws.'  
b. *wa'-ra-rast-e'*                      d. *a-ra-rast-e'*  
FACT-M.SG.A.draw-PFV                      OPT-M.SG.A.draw-PFV  
'He drew it.'                      'He should draw it.'

## AGAINST MORPHOLOGICAL INCOMPATIBILITY

- The prefix *th-* is also used in **contrastive** contexts without *iah*.

- (5) *keh thi-io-kare'tsher-a-hnin-on*                      *ne Jessica*  
just NEG-FZ.SG.P.cookie-LK-buy-PERF NE Jessica  
(Without thinking) 'Jessica just bought cookies.'

- Crucially, both factual and future prefixes are compatible with the negative prefixes when used in contrastive contexts.

- (6) a. *keh th-wa'-ha-atawen'*                      b. *keh th-en-ha-atawen'*  
just NEG-FACT-M.SG-swim-PFV                      just NEG-FUT-M.SG-swim-PFV  
'He just swam.'                      'He will just swim.'

### Generalisation 1.

Negative morphology is in principle compatible with factual and future prefixes. They do not compete for the same slot.

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## NEGATION AND FACTUAL FORMS

- Factual modal prefix is generally only compatible with the perfective aspect. However, with **purposive** verbs, it can also be used on the forms marked with **intensive aspect** (see Michelson & Doxtator 2002; Lukaniec 2018; Woodbury 2018)

- Intensive forms are often homophonous with punctual forms and are typically recognized by their ongoing interpretation.

- (7) a. *wa'-k-atorat-h-e'*  
FACT-1SG.A-hunt-PURP-INT  
'I am going to hunt.'  
b. *iah th-wa'-k-atorat-h-e'*  
NEG NEG-FACT-1SG.A-hunt-PURP-INT  
'I am not going to hunt.'
- (8) a. *wa'-k-atorat-h-a'*  
FACT-1SG.A-hunt-PURP-PFV  
'I went hunting.'  
b. \**iah th-wa'-k-atorat-h-a'*  
NEG NEG-FACT-1SG.A-hunt-PURP-PFV  
Int.: 'I did not go hunting.'
- However, in some cases, intensive is morphologically distinct from punctual, as shown in (7)-(8)
  - Crucially, it is possible to negate factual-intensive forms (7b), but not factual-punctual forms (8b).
  - Note that neither past tense interpretation nor perfective aspect of (8) cannot individually cause incompatibility with negation (cf. with (1b) and (2b) accordingly).

### Generalisation 2.

Negation is incompatible specifically with factual-punctual forms with past perfective interpretation.

## NEGATION AND FUTURE FORMS

### Generalisation 3.

Future is incompatible with negation regardless of the form's aspect.

- (9) a. \**iah th-en-ke-khonnii-hse-ke'*                      (10) a. \**lah th-en-wak-atshokw-en*  
NEG NEG-FUT-1SG.A-cook-IPFV-CONT                      NEG NEG-FUT-1SG.P-smoke-PERF  
'I will always cook.'                      Int.: 'I won't be smoking.'
- b. *iah th-a-ke-khonnii-hse-ke'*                      b. *lah th-a-wak-atshokw-en*  
NEG NEG-OPT-1SG.A-cook-IPFV-CONT                      NEG NEG-OPT-1SG.P-smoke-PERF  
'I won't cook again.'                      'I won't be smoking.'

## NEGATION AND SCOPE

- Across languages, we find modals that behave as PPIs and obligatorily scope over negation (Iatridou & Zeijlstra 2013).
- If modal prefixes only exhibit one scope relative to negation, it could narrow down possible reasons for the ungrammaticality of (1a) and (2a).
- However, we find that optative exhibit both scopes relative to negation.

- (11) *iah th-a-ra-tori'*  
NEG NEG-OPT-M.SG.A-drive-PERF  
1. 'He won't drive.'  
2. 'He shouldn't drive.'  
3. 'He doesn't have to drive.'

## DISCUSSION

### Takeaway.

Negation is semantically incompatible with certain forms in Kanien'kéha. This is not expected under the assumption that it is a simple logical truth-conditional operator  $\neg$ .

- Which semantic property of motivates this incompatibility?
- Both future and factual forms are reportedly associated with high degree of certainty.
  - "The factual [...] mode describes an event that is considered an established fact." (Michelson & Price 2011, p. 56)
  - "The future mode is used [...] to convey a high degree of probability with regard to its occurrence." (Michelson & Price 2011, p. 58)
- If "certainty" is presupposed, it would necessarily contradict the negative assertion.