Pitch patterns in standard negation in Alaskan Dene

Olga Lovick, University of Saskatchewan
Siri Tuttle, Navajo Technical University

Introduction

In most Alaskan Dene languages (exception: Han, Gwich'in), standard negation is expressed morphologically. Some languages additionally require particles

In the languages spoken along the Tanana River, it is also characterized by a special pitch pattern

No detailed description of this pattern exists for any of these languages

Indigenous Peoples and Languages of Alaska
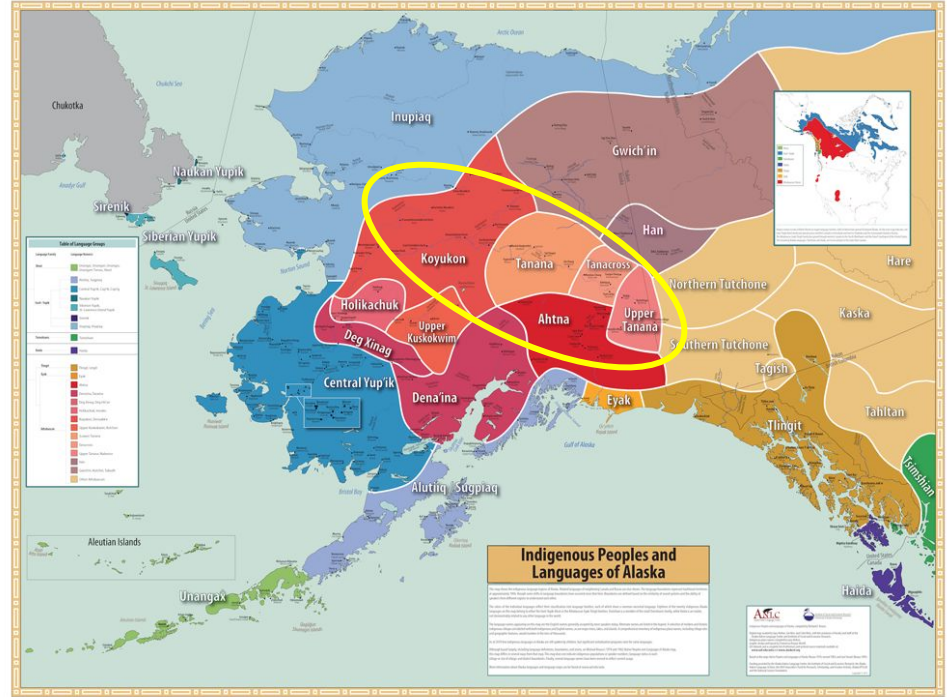
About our data

Data used in this study comes mainly from our own fieldwork. All the languages are highly endangered.

Language	Approximate number of speakers when researched	Researcher	Speakers consulted	Dates
Koyukon	100	Tuttle	6	2015-2020
Lower Tanana	15	Tuttle	8	1990-2015
Middle Tanana	1	Tuttle	1	1990-1993
Tanacross	50	Holton	10	1990-2003
Upper Tanana	50-70	Lovick	11	2006-2021

Today's goals

- Provide background information on morphosyntactic standard negation in Alaskan Dene
- Provide a detailed description of the "negative high" in the languages where it is attested (Koyukon, Lower Tanana, Middle Tanana, Tanacross, Upper Tanana)
- Give this pattern a place in the prosodic systems of these languages
- Suggest a possible explanation for this pattern
- Consider typological implications

Dene grammar

- Verb-final word order (with some post-verbal material)
- Three major lexical categories (verbs, nouns, postpositions)
- Greatest degree of complexity found in the verbal domain
- Polysynthetic, somewhat fusional, incorporating
- Predominantly prefixing
- Great morphological similarity across the language family with one well-documented exception: expression of standard negation (morphological/syntactic; cf. Krauss & Golla 1981, Leer 2000, van Gelderen 2008, Lovick 2020b)

Verbal morphology

Below is a simplified "template" of the Dene verb based on Hoijer (1971), Leer (2006). "Disjunct" prefixes are not discussed in this paper. We opt for a "zone" approach, since there are numerous prefix ordering differences between the languages (cf. Kari 1993, Hargus 2000, etc.)

The blue shaded zones are involved with the expression of standard negation.

Disjunct prefixes	#	Pronominal	Qualifiers	Conjugation + mode	Inner subject	voice/valence marker ("classifier")	STEM	suffixes

Standard negation summary

Non-perfective forms

- Negative prefix *zə/s(ə)- added, (affirmative) conjugation/mode complex retained*
- Negative suffix/enclitic *=(h)e

*In Tanacross and Upper Tanana, this prefix has mostly disappeared (Kari 1993, Holton 2000, Lovick 2020a, b)

Perfective forms

- Negative-perfective prefix *iʼ·- replaces (affirmative) conjugation/mode complex
- Negative-perfective suffix *-ł (often causes stem vowel modification)
- Negative suffix/enclitic *=(h)e

All languages other than Koyukon, Lower Tanana, and Middle Tanana additionally use a negative particle (see Lovick 2020b for overview)

Standard negation

Non-perfective forms

Inland Dena'ina
tuyuł
t-**ghe-yuł**
INCEP-CNJ-SG.go:FUT
's/he will walk'

nch'u tuzyul
nch'u   t-ghe-**z-yul**
NEG INCEP-CNJ-NEG-SG.go:FUT:NEG
's/he won't walk'

Perfective forms

Inland Dena'ina (Tenenbaum)
dazelchin
de-**z-i-**esh-l-**chin**
QUAL-CNJ-PFV-1SG.S-VV-make.SG.O:PFV
'I made a singular wooden object'

nch'u i'ełchil
nch'u   **i-**esh-ł-**chil**
NEG   NEG.PFV-1SG.S-VV-make.SG:NEG.PFV
'I did not make a singular object'

In addition

The following five languages have a special prosodic pattern associated with standard negation: Koyukon, Lower Tanana, Middle Tanana, Tanacross, and Upper Tanana
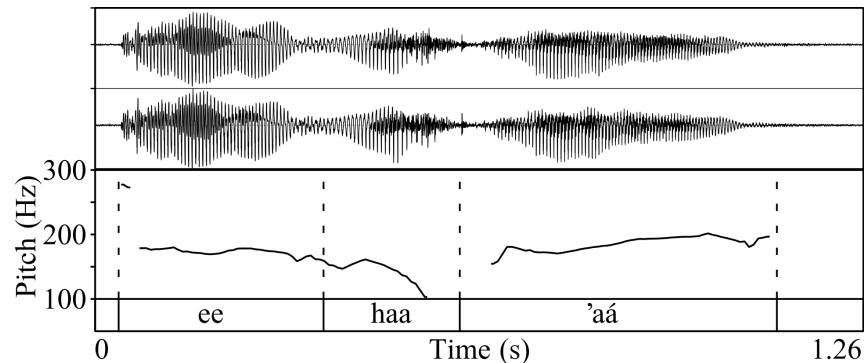
This pattern differs slightly between languages in its realization, as we will show in the next section using representative examples
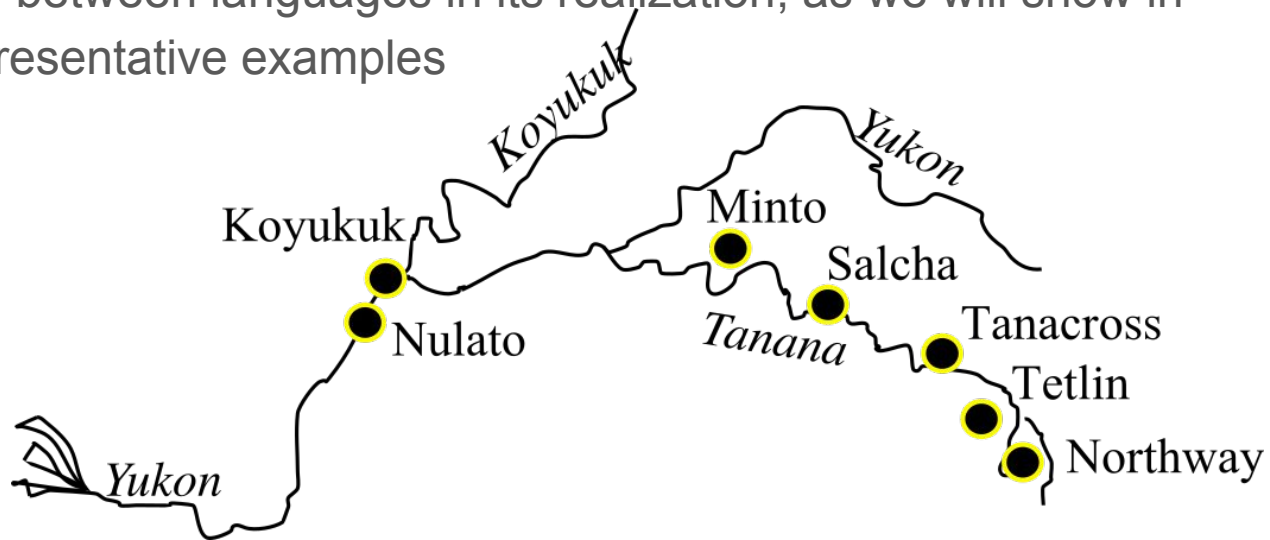
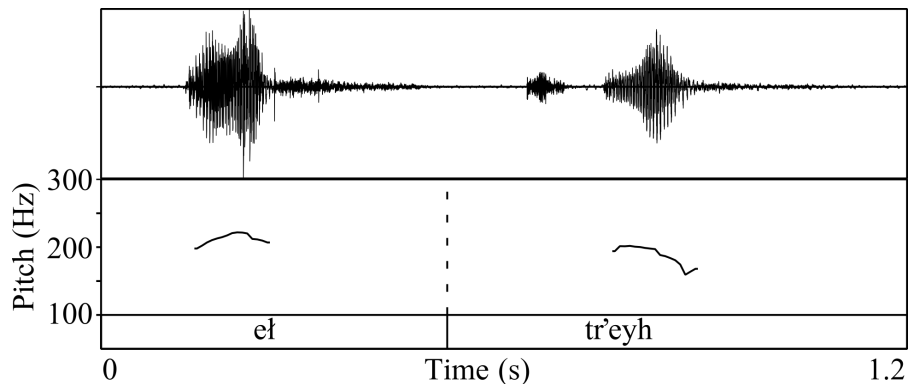# Downriver to Upriver - Denaakk'e (Koyukon, Nulato)
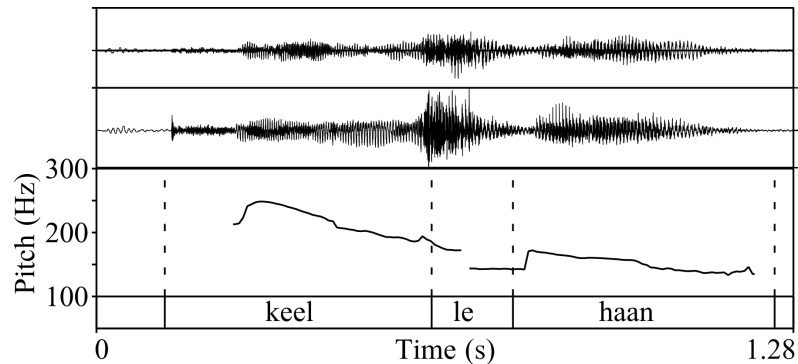
Keel lehaanh

keel   le-haanh
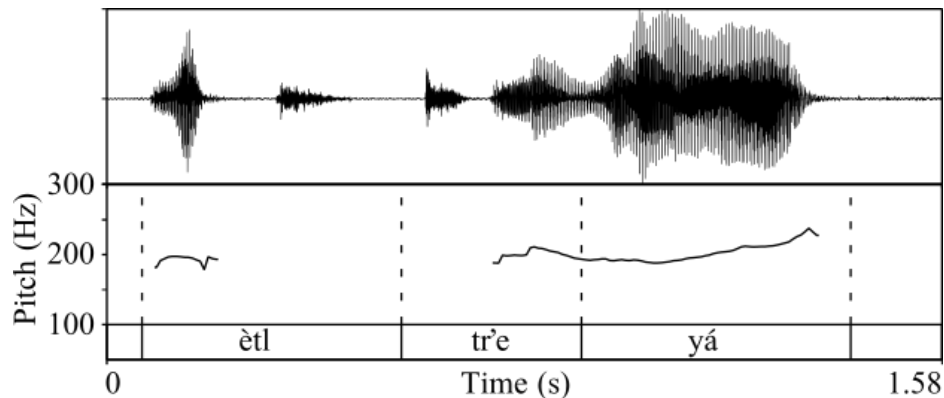
boy   CONJ-stand:IPV

'The boy is standing'

eehaa'aa

ee-haa-aa

NEG-stand:IPV-NEG

's/he is not standing'

Tuttle Recording/Notes 6/22/2017 Nulato

Minto-Nenana (Lower Tanana)
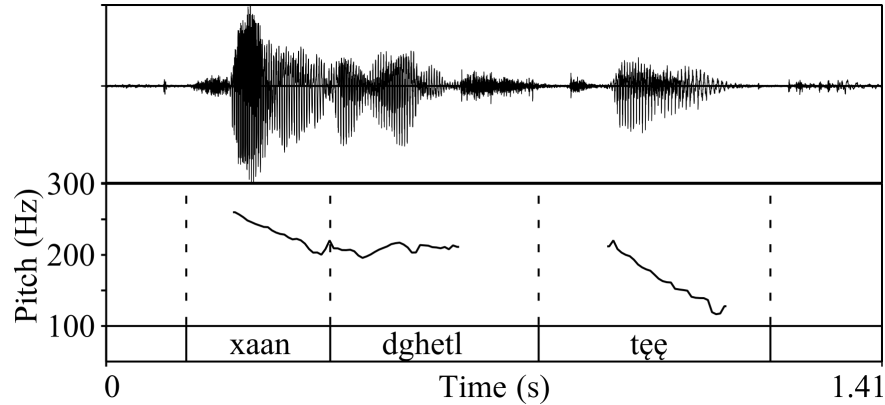

Ehẹ', eɫtr'eyh
Ehẹ'   e-ɫ-tr'eyh
 yes   IPFV-CL-be.windy:IPFV
'It's windy'

Etltr'eyá
E-dh-ɫ-tr'eyh-á
IPFV-NEG-CL-be.windy.IPFV-NEG
'It's not windy'

Recording by Ellen Frank, Findable here:
https://www.uaf.edu/anla/record.php?identifier=TN981K2008
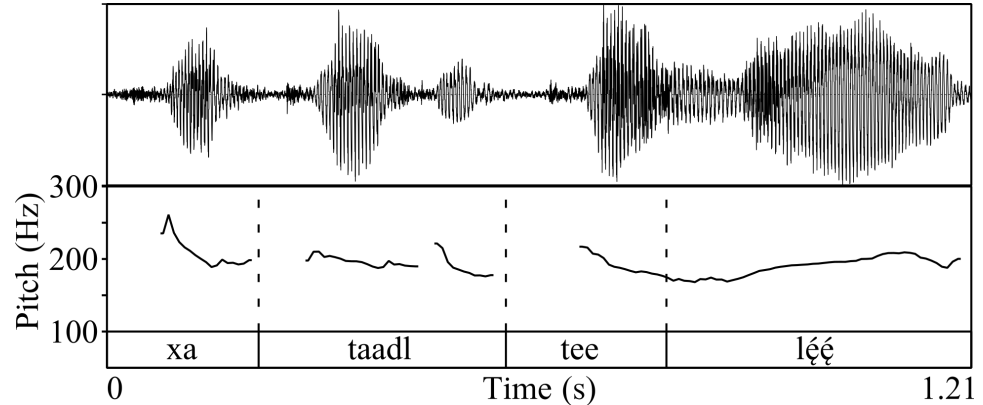
Salcha (Middle Tanana)

xaandghetltęę
xa-n-dghe-s-ł-teen
out-2sO-PFV-1sS-CL-move.animate:PFV
'I have put you in jail'

Tuttle recording/notes 1991

xataadlteelę́ę́
xa-taa-dh-l-teeł-ę́ę́
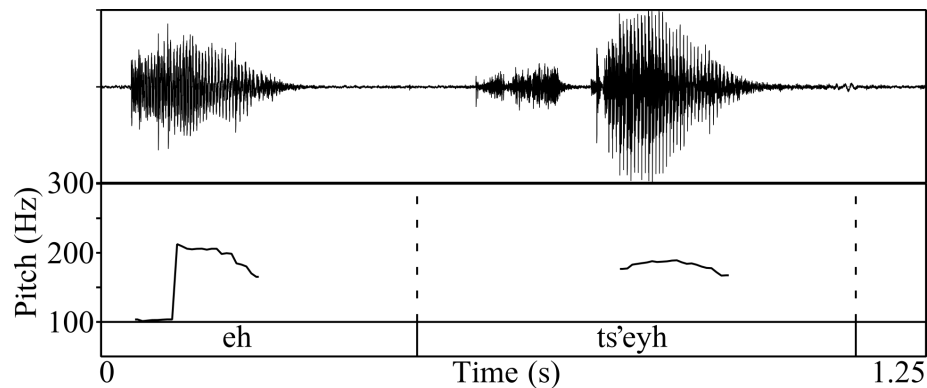out-FUT-NEG-CL-move.animate:FUT-NEG
'S/he will not be put in jail.'

https://www.uaf.edu/anla/record.php?identifier=ANLC0961
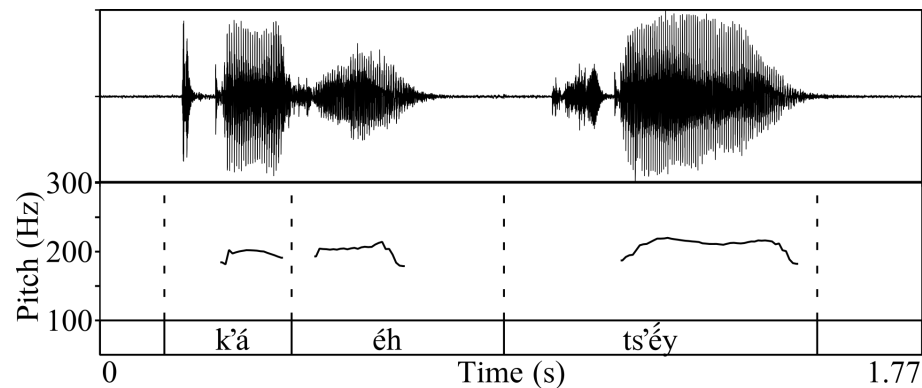https://www.uaf.edu/anla/record.php?identifier=ANLC0963

Tanacross

ehts'eyh
eh-ts'eyh
IPFV:CL-be.windy:IPFV
'It's windy'

k'á éhts'éy
k'á   éh-ts'éy
NEG NEG:IPFV:CL-be.windy:IPFV:NEG
'It's not windy'

https://www.uaf.edu/anla/record.php?identifier=ANLC0912 (recording, 1993)
https://www.uaf.edu/anla/record.php?identifier=TC990R1994b (publication, 1994)

Tetlin Upper Tanana
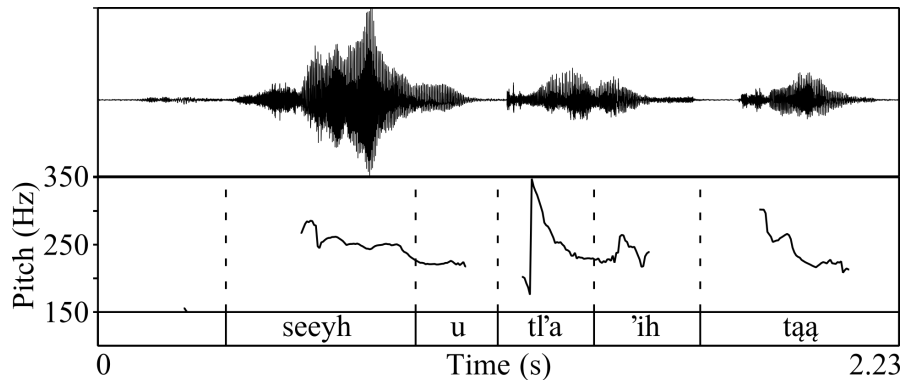
seeyh utl'a'ihtąą
seeyh u-tl'a-ih-tąą
knife 3SG.P-to-AA.PFV:1SG.S:ø-handle.LRO:PFV
'I gave him the knife'
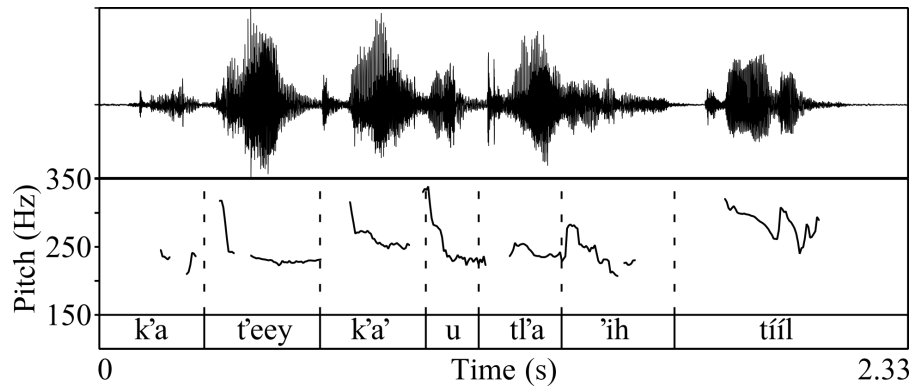
k'at'eey k'a' utl'a'ihtiil
k'at'eey k'a' u-tl'a-ih-tiil
NEG   gun   3SG.P-to-NEG.PFV:1sS:ø-handle.LRO:PFV:NEG
'I did not give him the gun'

Northway Upper Tanana
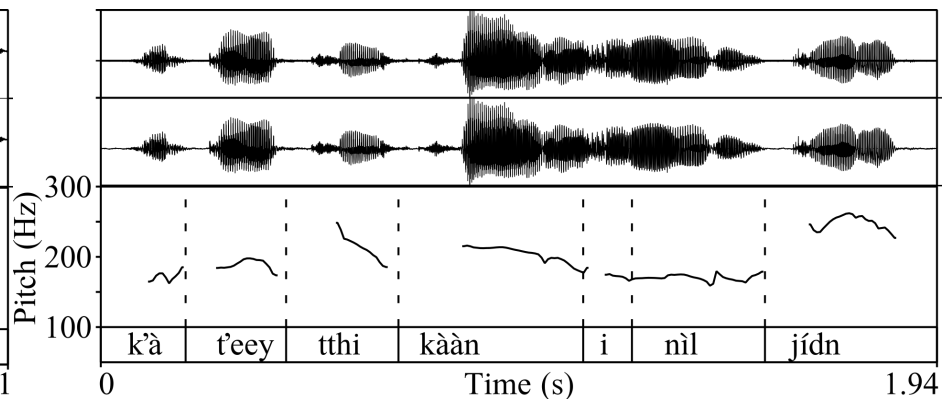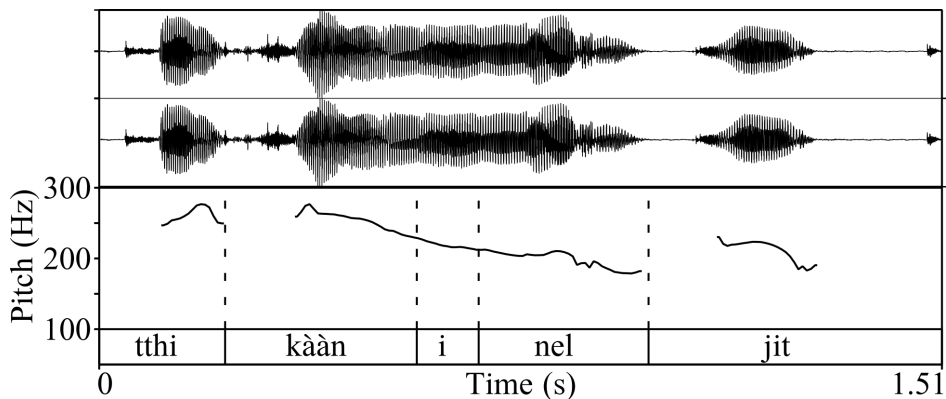
tthiikààn   i-nel-jit

wolf   PP-3SG.S:QUAL:ø.PFV:L-be.scared:IPV

'he is scared of the wolf'

K'àt'eey tthiikààn inìljídn

NEG   wolf   PP-3SG.S:QUAL:NEG.PFV:L-be.scared:IPV:NEG

'he is not scared of the wolf'

Interim summary

In the languages where the negative suffix is retained as a syllable, it is characterized by high-rising pitch, frequently accompanied by lengthening and/or nasalization (Koyukon, Lower Tanana, Middle Tanana)

In the languages where the negative suffix has been absorbed into the stem syllable, the stem bears extra-high (Tanacross) or high (Upper Tanana) pitch. No lengthening or nasalization can be detected

From here on...

- What is the place of the negative high tone in the grammar of these languages?
- Where does it come from? (Grammaticization of emphatic negation intonation)
- What are the typological implications?

Unrelated to tone from historical constriction

Gloss	Tanacross (Holton et al. 2009)	Tetlin Upper Tanana	Northway Upper Tanana
'I see it'	nek-'ęh	nak-'įh	nak-'įh
'coat, shirt'	eek	eek	eek
'plate'	**tth'áak**	**tth'aak**	**tth'ààk**
's/he left (again)'	natétshah	natetshyah	natètshyah
's/he's laughing'	edlóx	edloh	idlòh
'I do not see him/her'	**k'á nék-'ę́y**	**k'a nak-'ą́y**	**k'à nàk-'ą́y**
		Also: Salcha, Koyukon	Also: Minto

Development of grammatical tone

We suggest that the negative (extra-)high tone is a separate tonal system from constriction tone (which has primarily lexical but some grammatical function).

We define grammatical tone as a "tonological operation which is not general across the phonological grammar, and is **restricted to the context of a specific morpheme or construction**, or a natural class of morphemes or constructions (i.e. grammatically conditioned tone addition, deletion, replacement, shifting, assimilation, dissimilation, etc.)" (Rolle 2018:19; emphasis added)

Our next task is to investigate where it originates.

A form of emphasis? (aware that the term "emphasis" is problematic)

High pitch + lengthening are used to express

- "superlative" in Koyukon (Jetté 1907),
- "intensification" and "contrast" in Koyukon (Tuttle 2018)
- "prosodic augmentation" in Upper Tanana (Lovick in press, in review)
- Jetté & Jones (2000:5) report an "emphatic negative" suffix *-éé* [í:] in Koyukon that contrasts with a (non-tonal) non-emphatic negative suffix

Koyukon "superlative" augmentation

Denaa koh
Man big
'A big man'
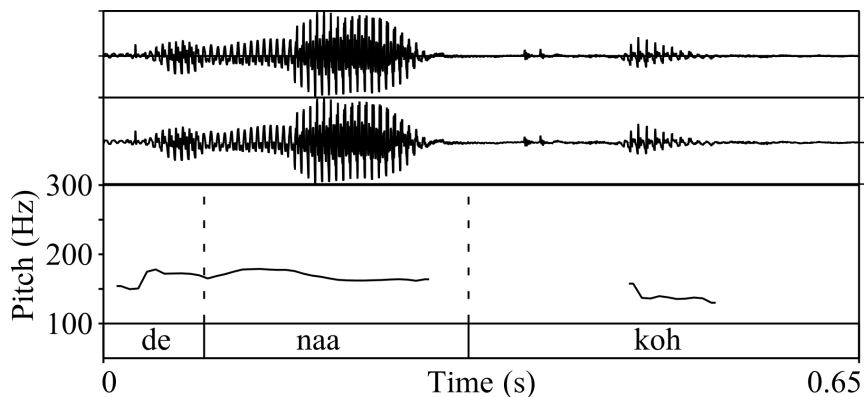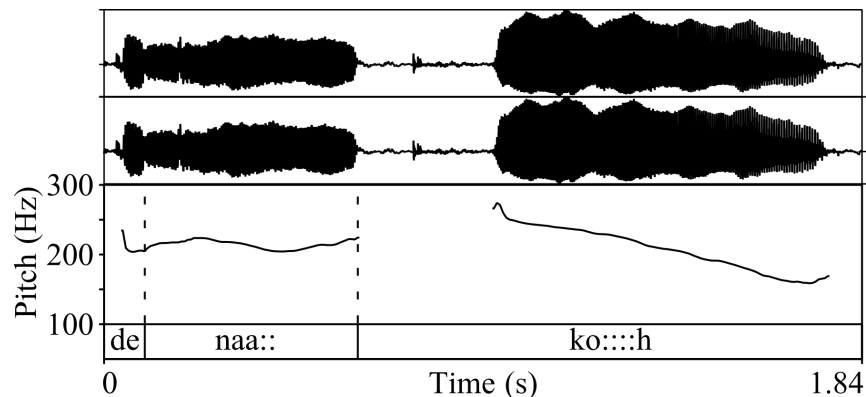
Denaa:: ko:::::h
Man big
'The biggest man, an enormous man'

Koyukon non-emphatic vs. emphatic negative
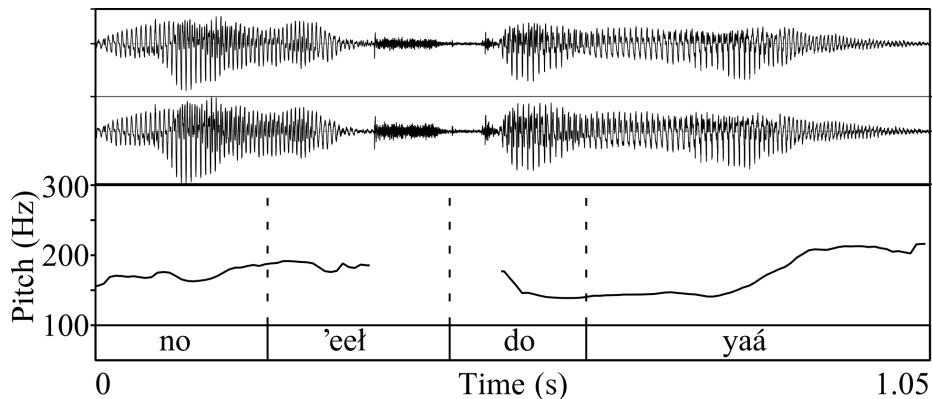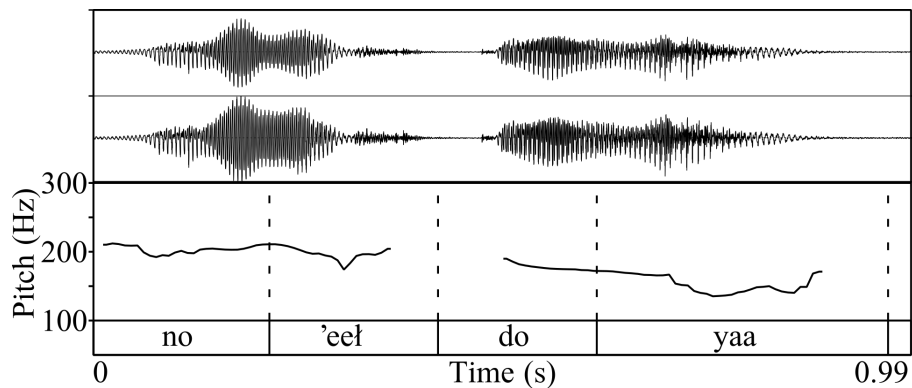
no'eełdoyaa (-yaá)
no-ee-ł-d-o-yaa (-aá)
back-PFV-NEG-CL-SG:go-NEG
'He didn't come back'

"*no'eełdoyaa* [he didn't come back] is a statement. But if you're really concerned about it, you say *no'eełdoyaā* "   (Jones, p.c., March 29, 2021)

Emphasis and negation

We suggest that in Lower Tanana, Middle Tanana, Tanacross, and Upper Tanana the pitch associated with emphatic negation was extended to the general standard negation pattern

A link between negation and emphasis is functionally plausible; the high emphatic pitch could be viewed as reinforcement of the negative morphology and particle -- an example for the negative cycle (Jespersen 1917, Dahl 1979).

Multiple exponents of standard negation

This renders the expression of standard negation unusually complex, with three (Koyukon, Lower Tanana, Middle Tanana) or even four (Tanacross, Upper Tanana) exponents of negation (Dahl 1979, Dryer 2013).

Exponents of standard negation
1. Prefixes
2. Suffixes
3. (Negative particle)
4. High pitch

Tone in negation

Although grammatical tone can potentially express any function in grammar (Hyman 2007), its use in negation is vanishingly rare:

- Dryer (2013) finds that tone is used in the expression of standard negation in 7 out of 1325 languages
- 6 of these languages in Africa, one in Papua New Guinea

Adding Alaskan Dene as a group where standard negation involves tone adds an important data point and changes the map!

Summing up

Standard negation in the Tanana languages has the following exponents:
- Prefixes
- Suffixes / stem changes
- Negative particles (TX + UT)
- High pitch on the verb stem

This is typologically unusual in two respects:
- Multiplicity of exponence
- Standard negation marked by tonal operation

We suggest that the high pitch in standard negation arises from extension or overgeneralization of an emphatic negation strategy still distinctive in some varieties of Koyukon

While this is originally an intonational pattern, we find that in the contemporary languages, it is better analyzed as a type of grammatical tone

Enaa Baasee - Basi' - Tsina'ęę - Tsin'ęę - Tsinah'įį - Tsin'įį !

Yukon River

To the speakers you heard:

From Nulato: Paulina Stickman
From Koyukuk: Eliza Jones
From Minto: Ellen Frank
From Salcha: Eva Moffat
From Tanacross: Irene Solomon Arnold
From Tetlin: Cora H. David
From Northway: Sherry Demit-Barnes

To you, the listeners

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Wider implications

Further research in prosodic patterns - especially those associated with emphasis - in all languages could make clearer the uses of high pitch that are not related to boundary marking, marking of word stress, or tonal patterns.

Investigation of other pitch patterns that are not related to historical vowel constriction is long overdue

Listening to native speakers' opinions and instruction on use of pitch. While we pursue particular questions in prosodic study, our consultants' judgments are not always foregrounded. Eliza Jones (p.c.) advocates explanation of intonation patterns to help language students develop full communicative competence.

The Alaska Dene Languages

Ahtna

Dena'ina

Deg Xinag

Gwich'in

Han

Holikachuk

Koyukon

Tanacross

Tanana (Lower and Middle)

Upper Kuskokwim

Upper Tanana

Indigenous Peoples and Languages of Alaska

An intonational pattern?

Holton (2005:263) suggests that in Tanacross the negative high may be an intonational pattern.

Almost all research on intonation in Alaskan Dene is concerned with boundary phenomena (Tuttle 1998 for Lower & Middle Tanana; Holton 2005 for Tanacross; Lovick & Tuttle 2011 for Upper Tanana; Berez 2011 for Ahtna; Lovick & Tuttle 2012 for Dena'ina).

The negative high is **not a boundary phenomenon**, since it occurs independently of the verb's place in the intonational unit. (Intonation is however not necessarily limited to boundary phenomena.)

Negative high in non-final position (Northway UT)

| k'à | t'eey | nàà | ch'i | nih | ką́ą́' | dih | t'eh | like |

Pitch (Hz): 350, 250, 150
Time (s): 0 — 2.89
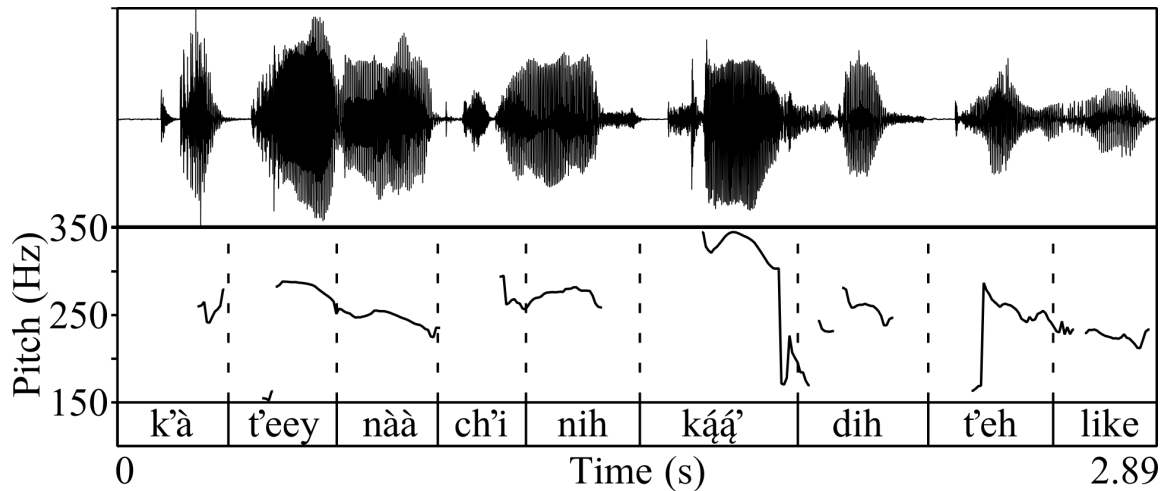
Analogous examples exist for the other varieties as well.

K'àt'eey nààch'inìhką́ą́'   diht'eh   like...

NEG   1SG:sew:IPV:NEG   1SG:ASRT

'I'm a person who doesn't sew; I don't sew'