REVISTA DA **ABRALIN**

THEORETICAL ESSAY

Typology and nuance: relativization

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ABSTRACT

Much of linguistic typology is inherently categorical. In large-scale typological surveys, grammatical constructions, distinctions, and even variables are typically classified as present, absent, or embodying one of a set of specified options. This work is valuable for a multitude of purposes, and in many cases such categorization is sufficient. In others, we can advance our understanding further if we take a more nuanced approach, considering the extent to which a particular construction, distinction, or variable is installed in the grammar. An important tool for this approach is the examination of unscripted speech in context, complete with prosody. This point is illustrated here with Mohawk, an Iroquoian language indigenous to the North American Northeast. As will be seen, the two types of construction which might be identified as relative clauses are emergent, one less integrated into the grammar than the other. Examination of spontaneous speech indicates that the earliest stages of development are prosodic, as speakers shape their messages according to their communicative purposes at each moment.

RESUMO

Uma grande parte da tipologia linguística é inerentemente categórica. Em levantamentos tipológicos de grande envergadura, as construções, as distinções e até mesmo as variáveis gramaticais são normalmente classificadas como presentes ou ausentes, ou como decorrentes de uma de um conjunto de opções especificadas. Este modo de trabalhar é de grande utilidade para múltiplos efeitos, e em muitos casos, essa categorização é suficiente. Noutros, porém, avança-se ainda mais o nosso entendimento se se adotar uma abordagem mais matizada, ao considerar até que ponto uma determinada construção, distinção ou variável está instaurada na gramática. Uma ferramenta importante para esta

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abordagem é a transcrição de fala espontânea gravada no contexto de enunciação, aumentada por uma análise prosódica. Ilustra-se esta questão, aqui, por referência ao mohawk, língua iroquesa indígena do nordeste da América do Norte. Como se verá, os dois tipos de construção que poderiam ser identificados como orações relativas são emergentes, estando um menos incorporado na gramática do que o outro. A análise da fala espontânea indica que os primeiros estágios de desenvolvimento são prosódicos e os/as falantes moldam suas mensagens de acordo com seus propósitos comunicativos de cada momento.

KEYWORDS
Grammaticalization. Mohawk. Relativization. Typology.

PALAVRAS-CHAVE
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Introduction

Some of the primary questions in linguistics are what languages share, how they can vary, and why. This inquiry involves the identification of categories for comparison and dimensions of variation. The resulting typologies can be a boon to those documenting and describing languages: they can facilitate the identification of constructions and distinctions, and alert the researcher to seek out information not yet part of the record. Much of typology is inherently categorical, both in terms of the constructions investigated and the variables checked off. The cross-linguistic comparability of typological categories has evoked discussion, such as that by Haspelmath (2018) and Evans (2020). But also underlying some typological work may be an assumption that the particular grammatical construction under study is crystallized to the same degree in all languages, an assumption flowing naturally from procedures necessarily involved in large-scale typological work. No single researcher can know hundreds of languages intimately, but a person or a team can read that many grammars in search of the crucial examples. The work can be streamlined if the grammars are grounded in a shared background in the typological literature, ensuring that all pertinent distinctions have been checked and specified.

Relative clause constructions provide a good example. There is now a wealth of typological work on relative clause types and points of variation within them, including that by Downing (1978), Comrie (1981; 1998), Lehmann (1984; 1986), Andrews (1986; 2007), Givón (2001), De Vries (2002; 2005), Comrie and Estrada-Fernández (2012), Hendery (2012), among others. It is generally agreed that basic

relative clause constructions may be restrictive (*the man who lives there*) or non-restrictive (*the man, who lives there*). Free relatives may be definite (*what you want*) or indefinite (*whatever you want*). Within these categories, there are recognized points of variation. One is position. Within headed relative clauses, the head may precede the relative clause (a head-initial construction), it may follow the relative clause (head-final), it may be contained within the relative clause (head-internal), or the relative clause may be adjoined outside of the nuclear clause. Another variable is the marking of the relative clause. There may be an invariant relativizer like English *that*, relative pronouns like English *who*, a verbal affix, or an obvious gap within the relative clause where the shared referent would otherwise be, as in English *the man [I met __]*. The relative clause itself may be fully finite, or it may show a less finite form. Still other points of variation are the possible grammatical roles of the shared referents (KEENAN; COMRIE 1977) within the relative clause and how these roles are indicated.

As techniques and technologies for language documentation have advanced, it has become possible to bring more nuance to our understanding of variation across languages, which can allow us to delve more deeply into the kinds of factors which shape variation. With the availability of corpora of unscripted speech, we can go beyond simple classification of the presence or absence of a variable to looking at contexts of use, prosody, frequency, and the extent to which a construction is installed in the grammar. Such considerations can, in turn, shed light on factors which might shape the development of grammar and the steps by which this might take place. These points are illustrated here with relative clauses in Mohawk, an Iroquoian language indigenous to the North American Northeast.

1. Mohawk

There are six main Mohawk communities, located in Quebec, New York State, and Ontario. The language is often cited as a prototypical example of polysynthesis: morphology can be complex, and single words can constitute full sentences in themselves. Lexical categories are traditionally defined for Iroquoian languages in terms of their internal morphological structure as particles, nouns, or verbs.

Particles are by definition monomorphemic, though they may be compounded.

(1)	*kwáh*	'gee!'
	skáthne	'together'
	áhsen	'three'
	iáh	'not'
	ki'	'in fact'
	wáhi'	TAG

They serve a wide variety of affective, adverbial, syntactic, discourse, and social functions.

Nouns can have relatively simple internal structure, consisting minimally of a gender or possessive prefix, a noun stem, and a noun suffix, though the noun stem may be complex, and additional enclitics may be added.[1]

(2) *ò:niare'*
o-niar-e-'
N-snake-EP-NS
'snake'

(3) *ake'shatsténhsera'*
ake-'shatsten-hser-a'
1SG.AL.POSS-be.strong-NMLZ-NS
'my power'

(4) *ohniare'kó:wa*
o-hniar-e-'=kowa
N-snake-NS=AUG
'serpent'

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[1] Transcriptions here are in the community orthography, which is essentially phonemic. Symbols are generally close to their IPA counterparts in the sounds represented. There are just 9 consonants (*t*, *k*, *s*, *h*, *'*, *n*, *r*, *w*, *i*), 6 vowels (*i*, *e*, *a*, *o*, *en*, *on*), and distinctive tone on stressed syllables. Obstruents are automatically voiced before voiced segments. The apostrophe <'> represents glottal stop. The letter *i* represents a palatal glide [j] before a vowel, and a high front unrounded vowel otherwise. The digraphs <en> and <on> represent single nasal vowels [ʌ̃] and [ũ] respectively. Stress is basically penultimate, though epenthetic vowels do not enter into the determination of stress. Open stressed syllables are lengthened, indicated with a colon <:>, though *h* can close a syllable. Stressed syllables marked with an acute accent <á> are pronounced with a high tone on short vowels as in *áhsen* 'three' and a rising tone on long syllables, as in the hearsay evidential *iá:ken*'. In open syllables, the tone may continue to rise into the following syllable, as in *wahón:níse*' 'long ago'. If a stressed vowel is followed by a glottal stop, the pitch rises abruptly then falls steeply, as in *rotòn:'on* 'he became'. If that glottal stop is followed by another consonant, it then disappears. A similar pitch contour results when a stressed syllable is closed by *h* and the following syllable begins with a resonant *n*, *r*, *w*, or the glide *i*. The *h* then disappears, as in *ò:niare*' 'snake'.

The following abbreviations are used in glossing:
agt = grammatical agent; al = alienable; art = article; aug = augmentative; ben = benefactive applicative; caus = causative; csl = cislocative; cont = continuative; contr = contrastive; dec = decessive; dim = diminutive; dir = directional applicative; distr = distributive; du = dual; dv = duplicative; ep = epenthetic; ex = exclusive; fac = factual; fi = feminine-indefinite gender; fut = future; fz = feminine-zoic gender; hab = habitual aspect; hrsy = hearsay evidential; imper = imperative; in = inclusive; inch = inchoative; ins = instrumental applicative; lk = linker; m = masculine; mid = middle voice; n = neuter; neg = negative; nmlz = nominalizer; ns = noun suffix; opt = optative (=irrealis); pat = grammatical patient; pfv = perfective; pl = plural; poss = possessive; prog = progressive; proth = prothetic; prt = partitive; refl = reflexive; rep = repetitive; rev = reversive; st = stative; trl = translocative; 1 = 1st person; 2 = 2nd person; 3 = 3rd person.

Morphological nouns function syntactically and semantically only as referring expressions.

Verbs contain, minimally, a pronominal prefix identifying the core argument(s) of the clause, a verb root, and an aspect suffix. They may, in addition, contain a number of additional prefixes and/or suffixes, as well as an incorporated noun stem.

(5) *Ionsahahnekóntsienhte*'.
i-onsa-ha-hnek-ontsien-ht-e-'
TRL-REP.FAC-M.SG.AGT-liquid-draw-CAUS-EP-PFV
'He dipped out some more water.' Sonny Edwards, speaker

(6) *Tentehsheia'ténhawe*'.
t-en-te-hshe-ia't-enhaw-e-'
DV-FUT-CSL-2SG>3PL-body-carry-EP-PFV
'You will bring them back here.' Sonny Edwards, speaker

(7) *Tha'kahnekaién:ta'ne*'.
th-a'-ka-hnek-a-ient-a'n-e-'
CONTR-FAC-N.AGT-liquid-LK-lie-INCH-EP-PFV
'The water calmed right down.' Sonny Edwards, speaker

The pronominal prefixes in verbs are fully referential in their own right. They may be coreferential with other elements in the clause, such as additional nominals or demonstratives. They may 'agree' with them, but they are not simply 'agreement markers'.

All Mohawk verbs are finite. They can serve not just as predicates, but also sentences and referring expressions without necessarily any further marking. The degree to which particular verbs are lexicalized as nominals varies along a continuum.

(8) *iakenheion'taientáhkhwa*'
iak-enhei-on-'t-a-ient-ahkw-ha'
FI.PAT-die-ST-NMLZ-LK-lay-INS-HAB
'one lays out the dead with it' = 'hospital'

(9) *ronnatén:ro*'
ronn-at-enro-'
M.PL-REFL-be.friends-ST
'they are friends to each other' = 'his friend(s)'

(10) *ioronkienèn:'en*
io-ront-ienen-'-en
N.PAT-log-toppled-INCH-ST
'it (a log) has toppled over' = 'fallen log'

2. Prototypical relative clauses

A skilled first-language Mohawk speaker, who is also a skilled English speaker, was asked to translate the sentence 'The children who are smart will pass' into Mohawk. She produced the sentence in (11).

(11) *Ratiksa'okòn:'a* *ne:ne* *roti'nikonhrowá:nen*
rati-ksa'=okon'a nene roti-'nikonhr-owan-en
M.PL-child=DISTR that M.PL.PAT-mind-be.big-ST
'The children [who are smart]'

tenhontóhetste'.
t-en-hon-at-ohtetst-e-'
DV-FUT-M.PL.AGT-MID-pass-EP-PFV
'will pass.'

She noted that the prosody can affect the interpretation. If there is a prosodic break after *ratiksa'okòn:'a* 'the children', a better translation would be 'The children, they are very smart, will pass.' The distinction is thus similar to that in many other languages, including English, whereby prosody can distinguish restrictive from non-restrictive relative clauses.

In terms of the kinds of variables usually mentioned in relative clause typologies, the construction in (11) could easily be classified as i) head-initial, ii) marked by a relativizer *ne:ne*, iii) with a finite relative clause, and iv) with the role of the shared argument in the relative clause specified by the pronominal prefix *roti-* 'they' on the verb 'they are smart'

In unscripted speech, however, both monologue and conversation, such constructions are actually exceedingly rare.[2]

[2] Material cited here is drawn from a corpus of nearly 300 recordings of monologue and conversation, varying in length from a few minutes to a few hours, totaling together just over 60 hours. Seventy-six speakers are represented.

2.1. Relativizer?

The particle *ne:ne* is relatively frequent in speech, usually appearing at the beginning of a clause. Its occurrence after a noun in what might be interpreted as a relative clause construction is rare, however. To illustrate the functioning of this particle in context in unscripted speech, examples in this section are drawn from a tale told by Sonny Edwards of Ahkwesáhsne about a man who became a serpent. The tale was transcribed, translated, and discussed at length with Mohawk speakers Margaret Edwards of Ahkwesáhsne and Annette Kaia'titáhkhe' Jacobs of Kahnawà:ke, who contributed valuable insight into the precise meanings of constructions.

The essence of the legend is as follows. Three friends went out to fish and beached their boat on an island, where they spent the night. The next day they fished without success. One of them, Teharenhsáhkhwa'[3], walked around to the other side of the island, where he found some fish in a log. He brought the fish back to his friends, but the friends were suspicious. He cooked the fish and ate them anyway. He then became very thirsty and began to drink furiously. When his friends woke up the next morning he was missing. They found him on the other side of the island, still drinking. His body was becoming longer. He crawled into the water. When he resurfaced they saw that he was changing into a snake. He advised his friends to go back home and return with seven strong men, which they did. When Teharenhsáhkhwa' again resurfaced, they saw that he had turned into something horrifying, but he promised to watch over the water and help fishermen through eternity. One man was chosen to watch over the winds, and another to watch over the rain. Teharenhsahkhwa' then explained to the group at length how they could summon him whenever they needed help.

The particle *ne:ne*, seen in the elicited sentence in (11) above, appears in (12), translated with an English relative clause construction.

(12) *Shaià:ta*,
s-ha-ia't-at
REP-M.SG.AGT-body-be.one
'One'

ronkwe'tarákwen,
r-onkwe-'t-a-r-akw-en
M.SG-be.a.person-NMLZ-EP-be.in-REV-ST
'man was chosen'

[3] There are two variants on the name of this character. This speaker used the form *Teharenhsáhkhwa*' 'he picks up the chain' with the incorporated noun root *-renhs-* 'chain', also used for a rosary, resulting in the translation of 'He Picks Up Beads'. Other speakers know this figure as *Teharahsáhkhwa*', a term which evokes high rubber boots instead.

ne:ne	*ówera'*	*enhaten'nikòn:rare'*,
nene	o-wr-a'	en-ha-ate-'nikonhr-a-r-e-'
that	N-wind-NS	FUT-M.SG.AGT-mind-LK-be.on-EP-PFV

'**who** would take care of the winds,'

ne	*Kaié:ri*	*Nikawerá:ke*	*ratina'tónhkhwa'.*
ne	ka-ieri	ni-ka-wer-ake	rati-na'ton-hkw-ha'
ART	N.AGT-be.right	PRT-N.AGT-wind-be.multiple	M.PL.AGT-call-INS-HAB

'what they call the Four Winds.' Sonny Edwards, speaker

It is not immediately clear what the head of the construction translated 'one man who would take care of the winds' might be in the Mohawk. Is it the incorporated noun stem *-onkwe't-* 'person'? Incorporated nouns are not normally referential, though they may evoke a referent. They serve primarily to narrow the semantic scope of the verb. The verb stem *-rakw-* on its own might be translated 'pick out, choose', but with the incorporated *-onkwe't-* 'person', it might be translated 'delegate' or 'elect'. Perhaps this is an adjoined relative clause with the head *shaià:ta*, used as a classificatory numeral for persons?

This example and others here are formatted according to their prosody. Each new intonation unit or prosodic phrase, characterized by a pitch reset and a coherent prosodic contour, begins flush left. Commas represent non-final terminal contours, usually a partial fall in pitch or sometimes a rise. Periods represent final terminal contours, usually a full fall. Intonation units are often combined into prosodic sentences. Within a prosodic sentence, each intonation unit shows a pitch reset on the first stressed syllable, but that reset is typically slightly lower on each successive unit. A pitch trace of the sentence in (12) is in Figure 1. The pitch reset can be seen on the first stressed syllable in each intonation unit (*sh**ià:**ta*, *ronkwe'tar**á**kwen*, ***ó**wera'*, *ka**ié:**ri*). Each began after a pause, a common but not universal feature of intonation units.

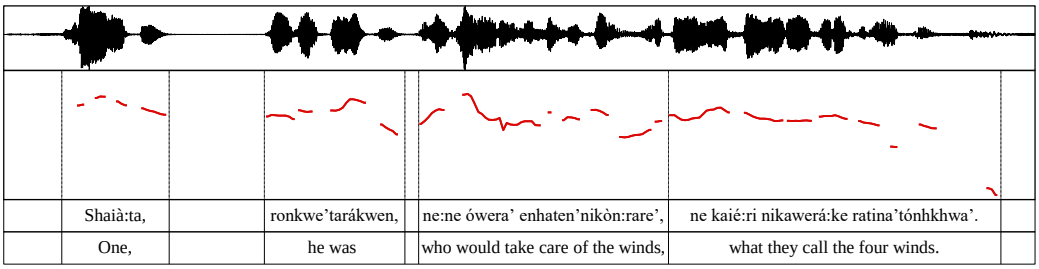

FIGURE 1: Example (12)

The sentence in (12) was followed by that in (13).

(13) *Shaià:ta* *ne:ne* *enhate'nikòn:rare'*
s-ha-ia't=at nene en-ha-ate-'nikonhr-a-r-e'
REP-M.SG-body-be.one that FUT-M.SG.AGT-MID-mind-LK-be.on-EP-PFV
'One will guard'

ne *tsi* *iokennó:ron's.*
ne tsi io-kennor-on-'s
ART as N.PAT-rain-ST-DISTR
'the rains.'

Ne:ne *Ratiwè:rahs* *ronwatí:iats.*
nene rati-wehr-ahs ronwati-iat-s
that M.PL.AGT-thunder-HAB FI>M.PL-call-HAB
'**These** are the ones called the Thunderers.' Sonny Edwards, speaker

The passage in (13) consisted of two prosodic sentences. As can be seen in Figure 2, each sentence began with a full pitch reset and ended in an audible terminal fall (partly obscured by the fact that each ends in a voiceless *s*). (Stressed syllables marked with a grave accent, like ***ià*** in *sha**ià**:ta*, ***kòn*** in *enhate'ni**kòn**:rare'* and ***wè:*** in *Rati**wè:**rahs* here, show a distinctive prosodic contour, consisting of a steep rise in pitch followed by an abrupt fall.)

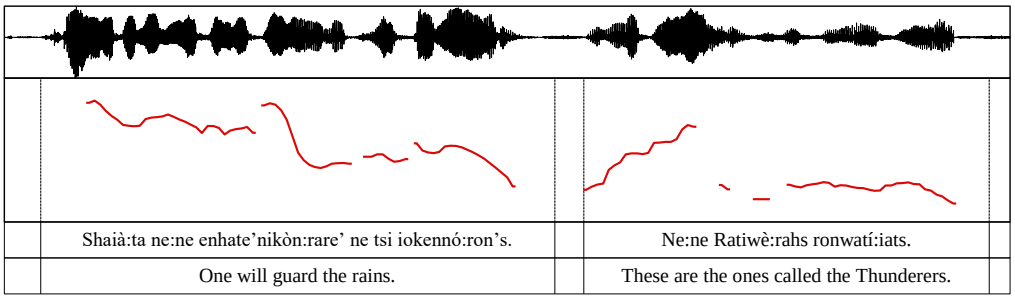

FIGURE 2: Example (13)

The first sentence, 'One will guard the rains', has the same structure as what was interpreted as a relative clause in the preceding example: it begins with the word *shaià:ta*' 'one' and contains the particle *ne:ne*. But it was translated by speakers as an independent sentence and has the prosodic profile of an independent sentence. The second sentence, 'These are the ones called the Thunderers', began with the particle *ne:ne*, was also translated as an independent sentence, and showed the prosody of an independent sentence, but it contained nothing that could be interpreted as a head noun. This is a common pattern.

A similar pattern can be seen in example (14), the beginning of the tale. The particle *ne:ne* began a new sentence here as well, picking up a referent mentioned in the preceding sentence.

(14) *Né: iá:ken ne' kí: rotikstenhokon'kénha' ratiká:ratonhskwe' ne wahón:nise'.*
'The old people long ago used to tell a story.'

Né: iá:ken rón:kwe ohniare'kó:wa rotòn:'on.
'That one was about a man who became a serpent.'

Ne:ne	*Teharenhsáhkhwa'*	*ronwá:iatskwe'.*
nene	te-ha-renhs-ahkw-ha'	ronwa-iat-s-kwe'
that	DV-M.SG.AGT-chain-pick.up-HAB	3PL>M.SG-call-HAB-PAST

'**That's the one** who was called "Teharenhsáhkhwa"'.' Sonny Edwards, speaker

There is no doubt that this last line was a separate sentence. It was translated by speakers as an independent sentence. As can be seen in Figure 3, the preceding sentence ended in a full terminal fall in pitch. This sentence began after a pause with a full pitch reset, then showed a steady declination in pitch until its own final terminal fall. Like all clauses, it is finite and contains full specification of its core arguments.

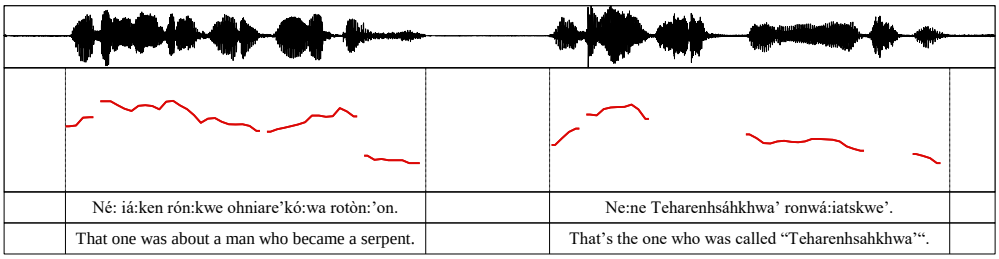

FIGURE 3: Example (14).

As can be seen, a basic function of *ne:ne* is as a discourse anaphor, an indicator that a referent has been mentioned sometime before, not necessarily with precisely the same words, and not necessarily in the same sentence, or even in an immediately preceding sentence.

Like many other languages, Mohawk has no copula. Predicate nominal constructions are formed by simple juxtaposition. The particle *ne:ne* often appears in such constructions. Speakers had been discussing some old gates in the village, trying to remember what they were for. It was suggested that they may have been used by livestock. The sentence in (15) added further detail.

(15)	*Ta'*	*nòn:wa'*	***ne:ne***	*tionhnhónhskwaron.*
	towa'	nonhwa'	nene	t-io-onhnhonskwar-ont-e'
	perhaps	now	that	CSL-N.PAT-jowl-be.attached.at.one.end-ST

'Maybe **it** was the cows.'

Katsi'tsenèn:tha' Ida Nicholas, speaker

The particle *ne:ne* also appears with nominalized clauses. As noted, verbs and larger clauses can and often do serve as referring expressions with no further marking. The particle *ne:ne* can make this function overt, with no obvious difference in meaning. The nominalization may refer to a core argument of the clause (participant nominalization) or to the whole assertion (event nominalization). An example of participant nominalization is in (16).

(16) **Ne:ne eniakothón:te'ne',**
nene en-iako-at-hont-e'
that FUT-FI.PAT-MID-listen-ST
'The one that hears this,'

nè:'e tenieia'tó:rehte' nahò:ten' enkì:ron'.
ne'e t-en-ie-ia't-ore-'n-e-' naho'ten' en-k-ihron-'
that DV-FUT-FI.AGT-body-balanced-INCH-EP-PFV what FUT-1SG.AGT-say-PFV
'that one will decide what I'm saying.'

Billy Kaientarónkwen Two Rivers, speaker

An example of event nominalization is in (17), part of a discussion about the forthcoming Mohawk grammar, designed for the community to be user-friendly. The particle *ne:ne* introduced the idea 'anybody could pick it up and understand what is written'. This clause served as a complement of the verb 'it would be possible', elaborating on what the 'it' referred to.

(17) *Aontonhseke' ken kí:ken **ne:ne**,*
aa-w-aton-hs-ek-e-' ken kiken nene
OPT-N.AGT-be.possible-HAB-CONT-EP-PFV Q this that
'Would it be possible'

tsik ónhka'k tá:iehkwe' tanon'
tsi=k onhka'=k t-aa-ie-hkw-e-' tanon'
that=just who=just DV-OPT-FI.AGT-pick.up-PFV and
'[for just anybody to pick it up and'

aiako'nikonhraién:ta'ne' tsi nahò:ten' kahia:ton?
aa-iako-'nikonhr-a-ient-a'n-e-' tsi naho'ten' ka-hiaton
OPT-FI.PAT-mind-LK-lie-INCH-EP-PFV that what N.AGT-write.ST
'understand what is written?]'

Annette Kaia'titáhkhe' Jacobs, speaker

Speakers note that the particle *ne:ne* can provide time to formulate the next part of the message. The prosodic break between the first and second lines of (17) shows how this might occur. (Certain speakers are known to use such a strategy pervasively.)

The use of the particle *ne:ne* could lead to some misanalyses. One might be tempted, for example, to interpret the particle in the second line of (18) (still part of the Teharenhsáhkhwa' tale) as a relative pronoun referring to the incorporated noun 'power' in the preceding verb.[4]

(18) *Wake'shatstenhserowá:nén,*
wake-'shatsten-hser-owan-en
1SG.PAT-be.strong-NMLZ-be.big-ST
'I am powerful / I have great power,'

ne:ne	*karonhià:ke*	*thèn:teron*
nene	ka-ronhi-a'-ke	t-ha-i'ter-on
that	N-sky-NS-PLACE	CSL-M.SG.AGT-dwell
that	in the sky	he lives

né	*thakwá:wi*	*ne*	*ka'shatsténhsera'. . .*
ne	t-hakw-awi	ne	ka-'shaten-hser-a'
that	CSL-M.SG>1SG-give.ST	the	N-be.strong-NMLZ-NS
that one	he gave me	the	strength

Sonny Edwards, speaker

Example (18) consisted of two intonation units, packaged together as a prosodic sentence. The first intonation unit, *Wake'shatstenhserowá:nen* did not end in a terminal fall, but, rather, showed the continuing rise in pitch to its final syllable which can indicate that more is to come.

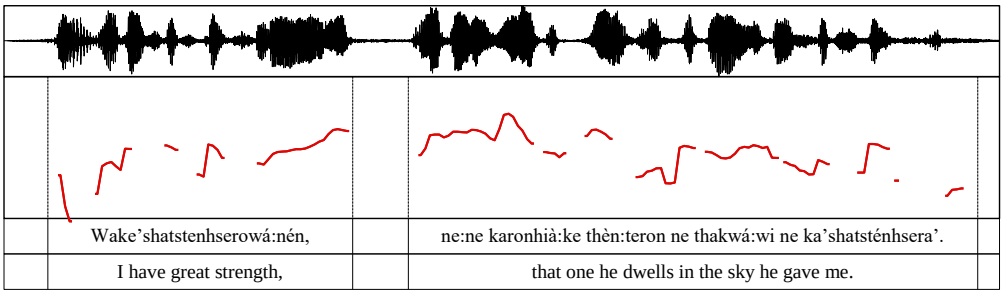

FIGURE 4: Example (18)

In fact the particle *ne:ne* does not refer to anything in the previous context, such as the incorporated -'*shatstenhser-* 'strength'. As confirmed by the speakers, it is part of the participant nominalization of 'he dwells in the sky'.

Though the particle *ne:ne* appears in some of the relatively rare constructions in Mohawk speech that might be translated with English relative clauses, it is not a dedicated marker of relativization. If functions primarily as a discourse anaphor, referring to anything in the previous context, or marking the referent of a nominalized clause, one of its core arguments.

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[4] The particles *ne:ne* and *né* are not the same, though both have histories involving demonstratives.

2.2. Unmarked relativization?

The particle *ne:ne* is also by no means obligatory in the few examples in the Mohawk corpus that could be translated with English relative clauses. The opening of the tale about Teharenhsáhkhwa' contained such an example, 'a man [who became a serpent]'.

(19) *Né: iá:ken ne' kí: rotikstenhokon'kénha' ratiká:ratonhskwe' ne wahón:nise'.*
'They say the old people used to tell a story long ago.'

Né:	*iá:ken'*	***rón:kwe***	***ohniare'kó:wa***	***rotòn:'on.***
ne'e	iaken	r-onkwe	o-hniar-e-'=kowa	ro-aton-'-on
that	HRSY	M.SG-person	N-snake-EP-NS=AUG	M.SG.PAT-become-INCH-ST
that	they say	**man**	**serpent**	**he became**

'That was about **a man [who became a serpent]**.'

Sonny Edwards, speaker

This last line was pronounced as a single prosodic sentence, consisting of just one intonation unit, as can be seen in Figure 5. (The special pitch contour mentioned earlier of syllables marked with a grave accent, consisting of a steep rise then abrupt fall, can be seen here on the penultimate syllable *tòn* of the word *rotòn:'a*, though the fall itself was not picked up in the pitch trace.)

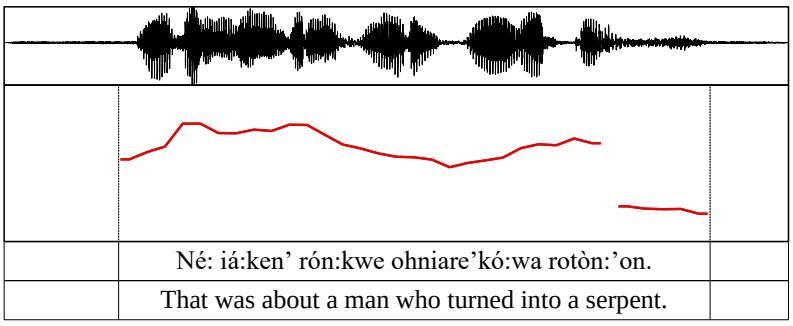

FIGURE 5: Example (19)

Speakers note that this sequence of words would be a perfectly acceptable sentence on its own: 'They say a man turned into a serpent'.

Another example of an unmarked clause which might be translated as a relative clause occurred later in the narrative, that in (20) 'this man [who was called Teharenhsáhkhwa']'.

(20) *Sok* ***kí:*** ***shaià:ta*** ***ki:*** ***rón:kwe***

sok	kiken	s-ha-ia't-at	kiken	r-onkwe
so	this	REP-M.SG.AGT-body-be.one	this	M.SG-person
so	**this**	**one**	**this**	**man**

'So this **one man**'

Teharenhsáhkhwa'	***ronwá:iatskwe',***
te-ha-renhs-ahkw-ha'	ronwa-iat-s-kwe'
DV-M.SG.AGT-chain-pick.up-HAB	3PL>M.SG-call.by.name-HAB-PAST
Teharenhsáhkhwa'	**they called him**
'[**who was called Teharenhsáhkhwa'**],'	

né:	*iá:ken'*	*wahahtén:ti'*	*ki:*
ne'e	iaken'	wa-ha-ahtenti-'	kiken
that.one	HRSY	FAC-M.SG.AGT-go-PFV	this
'that one went'			

wahréhson	*tsi*	*wehnóhkote'.*
wa-hr-e-hson-'	tsi	ka-wehn-o-hkw-ot-e-'
FAC-M.SG.AGT-go-DISTR-PFV	at	N.AGT-island-be.in.water-NMLZ-stand-EP-ST
'and strolled around on the island.'		

Sonny Edwards, speaker

Here the distinction between an interpretation as a relative clause construction 'this one man [who was called Teharenhsahkhwa']' and an independent sentence 'This man was called Teharenhsáhkhwa" is even less obvious. This sequence of words could constitute a fully grammatical sentence on its own. As in the preceding example, there is no relativizer. Like all clauses in the language, it is fully finite. Furthermore, the prosody was similar to that of an independent sentence.

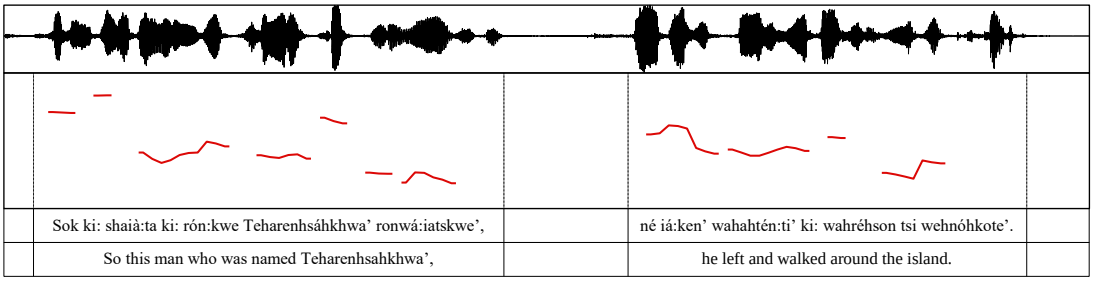

FIGURE 6: Example (20)

It began with a high pitch reset and ended with a fairly low fall. The following clause began after a pause with a pitch reset of its own. (The initial pitch resets of the two clauses here are more similar than they might first appear: the first appears higher only because that stressed syllable has the special tone contour marked with a grave accent *sha**ià:**ta*, a tone contour which consists of an initial steep rise then precipitous fall, often not picked up on the pitch trace because of creakiness.) The second clause ended with an audible full terminal fall, slightly lower than the first, but because it was nearly voiceless, it was not picked up in the pitch trace.

This sentence shows the special prosodic pattern of a topic shift construction. Such constructions begin with the shifted topic, here 'this man named Teharenhsáhkhwa', then are followed, often after a pause, by the nuclear clause, which always begins with another pitch reset. The new topic was picked up with the particle *né:* 'that one', though such is not always the case in topic shift constructions. The referent is always repeated in the pronominal prefix on the verb in any case.

Here perhaps the strongest cue for interpretation as a relative clause is the discourse context. The opening to the tale was seen in (14): 'They say the old people used to tell a story long ago. That was about a man who became a serpent. That's the one who was called Teharenhsáhkhwa". Example (20) occurred later in the story, after the account of the friends setting out, beaching the boat on the island, spending the night, then fishing all day without success. Since Teharenhsáhkhwa' had been introduced at the beginning of the story, this clause was not asserting new information.

Evidence for the formal status of (20) as a prototypical relative clause construction is thus less than robust. There is no relativizer. There is no diagnostic gap within the clause comparable to English *the man [I met __]*, because all Mohawk clauses contain pronominal reference to their core arguments. There is no special marker of the role of a shared referent in a relative clause, but then all Mohawk verbs contain obligatory pronominal reference to their core arguments. The clause is fully finite: it could stand alone as a perfectly grammatical sentence on its own.

The absence of a prosodic break in (19) 'the man (who) became a serpent' and (20) 'this man (who) was named Teharenhsáhkhwa" would be in keeping with an interpretation of these constructions as restrictive. Similar constructions, with a prosodic break, might be analyzed as their non-restrictive counterparts: 'He saw a tree, [which had fallen]'.

(21) *Wahatkáhtho'* *kwi'*,
wa-ha-at-kahtho-' ki'=wahi'
FAC-M.SG.AGT-MID-see-PFV in.fact=TAG
'He saw,'

kérhite',
ka-erh-it-e-'
N.AGT-tree-stand-EP-ST
'it tree stands' = 'a tree',

ioronkienèn:'en.
io-ront-ienen-'-en
N.PAT-log-toppled-INCH-ST
'it has log toppled' = 'a fallen log'.

Sonny Edwards, speaker

But such an analysis would miss patterns of speech that pervade the language as a whole. Speakers often present information in a sequence beginning with one intonation unit, often a verb and perhaps some particles, then augment it in successive intonation units. The verb *wahatkáhtho'* in (21) could be a complete sentence on its own: 'He saw it'. (Neuters are not represented overtly in the pronominal prefixes on verbs if another participant is present.) But it ended in a non-terminal fall in pitch, marked here with a comma. Both *kérhite'* and *ioronkienèn:'en* are morphological verbs. Both can be used referentially, but the degrees to which they are lexicalized as such differ subtly. The first is the usual term for 'tree' in some of the Mohawk communities; it is not normally used predicatively. The second is used both to assert a fact ('What happened to the tree?' 'It fell.') and to refer ('fallen log'). One could perhaps force an analysis of this as 'he saw a tree [which had fallen], but a more likely interpretation, particularly in light of the prosody, is a pattern of statement plus elaboration. Such patterns of information

packaging in discourse are certainly not uncommon across languages. It is of a type of what is sometimes referred to as 'incremental discourse information structure' (ASHER; VIEU 2005; COSME 2008; HASSELGÅRD et al. 2002; MODER; MARTINOVIC-ZIC 2004).

In sum, on the basis of the elicited example in (11) 'The children who are smart will pass', it would seem easy to check off the typological variables pertinent to classifying Mohawk relative clause constructions. But a closer look shows that this construction, consisting of a noun followed by the particle *ne:ne* and a modifying clause, or even followed by just a modifying clause, is actually infrequent in speech. The particle *ne:ne* usually functions either as an anaphoric demonstrative or cataphorically to the referent of a following nominalized clause. The interpretation of those constructions translated with relative clauses comes in most cases from prosody and context. And prosody, in this case the prosodic integration of clauses, is not strictly categorical. The factors that typically signal integration, namely pitch contours, potential pauses, and rhythm (initial rush, final lag) are all continua.

2.3. Incipient relativization?

There is a body of literature on the pathways by which relative clauses develop in languages, including that by Lehmann (1984; 1986), Heine and Kuteva (2006, 2007), Givón (2008; 2009), and Hendery (2012). On the basis of a survey of a large number of languages, Heine and Kuteva (2007, p. 224-229) describe one which originates in constructions containing demonstratives.

(22) Demonstrative channel: Heine and Kuteva (2007, p. 226)
1. From [S_1 to S_2] juxtaposition to S_1 [S_2] relativization
   a. *There is the car*; ***that*** (*one*) *I like.*
   b. *There is the car [that I like].*

2. Reinterpretation
   a. The demonstrative pro of S_2 refers anaphorically to a participant of S_1.
   b. The demonstrative is grammaticalized to a relative clause marker.
   c. S_2 is grammaticalized to a relative clause.
   d. The demonstrative pronoun loses spatial deixis and can no longer be used as a demonstrative attribute.
   e. The demonstrative pronoun undergoes erosion (loss of stress)
   f. The two clauses tend to be united under one intonation contour.

Some of the processes they list under Reinterpretation evoke features of the relatively rare Mohawk constructions translatable with English headed relative clauses. a) There may be a demonstrative pronoun *ne:ne*, which can refer anaphorically to a participant of the preceding clause. But when it is not present, speakers do not feel that anything has been omitted, and that particle may actually be marking the following clause as a nominalization. b) It is not entirely clear that *ne:ne* has become a full-fledged relative clause marker; it is certainly not a dedicated one. c) It is similarly not clear

that the clause in question is a full-fledged relative clause. d) The demonstrative *ne:ne* includes no spatial deixis, and there is no evidence within the modern language that it once did, though it may once have; there are other demonstratives in the language with spatial deixis. e) The particle *ne:ne* is usually, though not always, pronounced with little stress. f) There is, however, always some prosodic integration of two clauses.

Mohawk may, then, show very early stages of development toward a relative clause construction. A consideration of usage patterns, including frequency, context, and variation, might provide a snapshot of a moment in such a development, helping us to refine our ideas about sequencing of the various processes involved.

3. Free relatives

Many languages also have what are termed 'free relatives' or 'headless relatives', like the English *I'll have [**what she's having***], or *[**whoever wants it***] *can have it.* Mohawk contains a full set of these, and they occur pervasively in speech.

3.1. Mohawk free relatives

Some examples of free relatives built on *ónhka*' 'who, someone, anyone' are in (23) - (25). It is often but not necessarily combined with the article *ne*, yielding *nónhka*'.

(23)	*Thó*	*ni'*	*nón:*	*tewakatkáhthon*
	tho	ni'i	nonwe	te-wak-at-kahth-on
	there	1	where	CSL-1PL.PAT-MID-see-ST
	'That's where I saw'			

nónhka'	***teioratahnó:tes***	***taionráhta'.***
ne=onhka'	te-io-rat-a-hnot-es	t-aa-ie-ara-hta-'
ART=who	DV-N.PAT-heel-LK-depth-be.long	DV-OPT-FI.AGT-be.shod-INS-HAB

'**someone wearing high heels.**'

Watshenní:ne Sawyer, speaker

(24) *Iakherihonnién:ni*,
iakhi-rihw-onni-enni
1EX.PL>3PL-matter-make-BEN
'We teach them,'

ónhka'	***í:ienhre'***	***aontá:ien'***	*wáhi'*.
onhka'	i-ie-ehr-e'	aa-onta-ie-e-'	wahi'
who	PROTH-FI.AGT-want-ST	OPT-CSL-FI.AGT-goo-PFV	TAG

'**whoever wants to come** don't we.'

Charlotte Kaherákwas Bush, speaker

(25) ***Ónhka'*** ***tiotierénhton*** ***éntsionwe'***
onhka' t-io-at-ierenht-on en-ts-ie-ew-e-'
who CSL-N.PAT-MID-be.first-ST FUT-REP-FI.AGT-arrive-EP-PFV
'**Whoever is the first to return'**

ne ***aten'enhrákta'***,
ne aten'enhr-akta'
ART fence-beside
'here beside the fence,'

kí:	*ó:nen*	*ki'*	*eniontkwé:ni'*.
kiken	onen	ki'	en-ie-at-kweni-'
this	then	in.fact	FUT-FI.AGT-MID-win-PFV

'will be the winner.'

Ima Johnson, speaker

As noted earlier, the pronominal prefixes on verbs are fully referential in their own right. The relation between them and coreferential elements, including indefinite pronouns like *ónhka*', is one of apposition.

There are also free relatives built on the indefinite pronoun *nahò:ten*' 'what, something, anything', which may or may not be preceded by the particle *tsi*, again with no discernible effect on meaning. (The particle *nahò:ten*' originated as a verb *na-h-o'ten-*' PARTITIVE-NEUTER-be.a.kind.of-STATIVE 'it is such a kind of'. It is now often shortened to *nahoten*'.)

(26) *Tó:ske* *iáh* *tewakatahonhsatá:ton* ***nahò:ten'*** ***wahsekhró:ri'.***
toske iah te-wak-at-ahonhs-atat-on naho'ten' wa-hsek-hrori-'
truly not NEG-1SG.PAT-MID-ear-stand-ST what FAC-2SG>1SG-tell-PFV
'I certainly didn't listen to **what you told me.'**

Sonny Edwards, speaker

(27) *Wahonnetáhko*'
wa-honn-et-ahkw-'
FAC-M.PL.AGT-be.in-REV-PFV
'They took out'

tsi	***nahò:ten'***	***wá:tahkwe'***	***ne***	***kahón:wakon.***
tsi	naho'ten'	w-at-ahkw-e-'	ne	ka-honw-a-kon
that	what	N.AGT-MID-put.on-EP-ST	ART	N-boat-EP-interior

'whatever was on the boat.'

Josephine Kaieríthon Horne, speaker

(28)

Se'nikòn:rarak		***nahò:ten'***	***enhsì:ron'***!
se-'nikonhr-a-ra-k		naho'ten'	en-hs-ihron-'
2SG.AGT.IMPER-mind-LK-be.on-CONT		what	FUT-2SG.AGT-say-PFV

'Watch **what you say**!'

Annette Kaia'titáhkhe' Jacobs, speaker

There are also free relatives based on the phrase *tsi niká:ien'*, 'the ones'.

(29)

É:so'	*iaken'*	*tetiattíhen*		*ne*
eso'	iaken'	te-ki-at-tih-en		ne
much	HRSY	DV-3DU.AGT-MID-be.different-ST		ART

'There was a big difference with'

tsi	***niká:ien'***	***ne***	***thó***	***iehonnehthahkwe'***	***Totáhne.***
tsi	ni-ka-ien-'	ne	tho	ie-honn-eht-ahkwe'	tota=hne
that	PRT-N.AGT-lie-ST	ART	there	TRL-M.PL.AGT-go-HAB.PAST	gram=PLACE

'**the ones that used to go there to Totáhne** (the Language Nest).'

Tewateronhiáhkhwa' Mina Beauvais, speaker

(30)

É:so'	*wa'kèn:ron'*	*ne*	*kawirí:io's*
eso'	wa'-ka-ihron-'	ne	ka-wir-iio-'s
much	FAC-FZ.AGT-say-PFV	ART	N.AGT-child-be.good-ST.DISTR

She said they were really good kids,'

tsi	***niká:ien'***	***ne***	***Totáhne***	***iehoné:non.***
tsi	ni-ka-ien-'	ne	tota=hne	ie-hon-e-n-on
that	PRT-N.AGT-lie-ST	ART	gram=PLACE	TRL-M.PL.PAT-go-DIR-ST

'**those who had gone to Totáhne** (the Language Nest).'

Tewateronhiáhkhwa' Mina Beauvais, speaker

(31)

Khna'	*ne'*	*tho*	*ní:*	*tsi*	*enhatiweientéhta'ne'*
ok=na'a	ne'e	tho	ni-io-ht	tsi	en-hati-weiente-ht-a'n-e-'
and=guess	it.is	there	PRT-N-be.so	as	FUT-M.PL.AGT-know.how-CAUS-INCH-PFV

'In that way they'll learn,'

tsi	***niká:ien'***	***ne***	***iethirihonnién:ni.***
tsi	ni-ka-ien-'	ne	iethi-rihw-onni-enni
that	PRT-N.AGT-lie-ST	ART	1IN.DP-matter-make-BEN

'**those that we teach**.'

Annette Kaia'titáhkhe' Jacobs, speaker

Free relatives referring to place are built on the phrase *tsi nón:we* 'where', often shortened to *tsi nón:*.

(32)

Né:	*ki'*	*thí:*	*ronathró:ri*	*thí:ken--*
ne:	ki'	thiken	ron-at-hrori	thiken
it.is	in.fact	that	M.PL.AGT-MID-talk	that

'What they were talking about'

tsi	***nón:***	***nihontkari'sheronnia:tha'***	*wáhi'*.
tsi	nonwe	ni-hon-at-kari-'sher-onni-a't-ha'	wahi'
at	place	PRT-M.PL.AGT-MID-amuse-NMLZ-make-CAUS-HAB	TAG

'**where they play**, you know.'

Charlotte Kaherákwas Bush, speaker

(33)

Tekaniehtohtárhon	***tsi***	***nón:we***	***ní:ien'***.
te-ka-nieht-ohtarh-on	tsi	nonwe	ni-ie-e-'
DV-N.AGT-snow-tidy-ST	at	place	PRT-FI.AGT-go-ST

'The snow had been removed **where she was walking**.'

Mae Niioronha:'a Montour, speaker

(34)

Tsi	***nón:we***	***ièn:re'***
tsi	nonwe	i-en-hr-e-'
at	place	TRL-FUT-M.SG.AGT-go-PFV

'**Wherever he goes**,'

ó:nenk	*iá:ken'*	*tsi*	*enhathahíta'*.
onen=k	iaken	tsi	en-ha-at-hah-it-'a-'
now=only	HRSY	that	FUT-M.SG.AGT-MID-road-be.in-INCH-PFV

'he goes on foot.'

Karihwénhawe Dorothy Lazore, speaker

Some free relatives are built on particles originally descended from verbs meaning 'be an amount'. The forms are *tsi níts(i)on* for inclusive first persons (1+2DP), *tsi niiátion/niiákion* for exclusive first persons (1+3DP), *tsi níts(i)on* for second persons (2DP), *tsi ní:kon* for neuters (N), *nikón:ti* for female persons or animals (FZ.DP), and *nihá:ti* for males or a mixed group.

(35)

Akwé:	*wa'tkwanonhwerá:ton'*,		
akwek-on	wa'-t-kwa-nonhweraton-'		
be.all-ST	FAC-DV-1EX>2PL-greet-PFV		

'We greet you all,

tsi	***nítson***	***sewatahónhsate'***.	.	.	.
tsi	ni-tsi-on	sewa-at-ahonhs-at-e-'			
so	PRT-2PL.AGT-amount	2PL-MID-ear-standing-EP-ST			

'**those of you who are listening**.' . . .

Né:	*ki:*	*ni:'*	*kí:ken*,
nè:'e	kiken	ohni'	kiken
that	this	also	this

'Also'

wà:kehre'	*akwé:kon,*
wa'-k-ehr-e-'	akwek-on
FAC-1SG.AGT-think-EP-ST	be.all-ST
'I thought'	

tenkhenonhwerá:ton'
t-en-khe-nonhweraton-'
DV-FUT-1SG>3PL-greet-PFV
'I would greet all these who

kí:ken	***tsi***	***nihá:ti***	***sahontáweia'te',***
kiken	tsi	ni-hati	sa-hon-at-aweia't-e-'
this	so	**PRT-M.PL.AGT**	REP.FAC-M.PL.AGT-MID-enter-EP-PFV

'those who got back in'

wi'	*tsi*	*thi:*	*iethina'tónhkhwa'*
wahi'	tsi	thiken	iethina'ton-hkw-ha'
TAG	so	those	1IN.DP>3PL-call.by.name-INS-HAB

'those we call'

kwi'	*ratitsénhaiens.*
ki'=wahi'	rati-tsienh-a-ien-s
in.fact=TAG	MPL.AGT-fire-lay-HAB

'councilors.'

Joe Awenhrathen Deer, speaker

3.2. Development through time

The development of relative clauses from constructions containing demonstratives was described in Section 3.3. A second common pathway is from constructions containing interrogative pronouns. Based on an examination of the documented development of relative pronouns in European languages, Heine and Kuteva (2006) provide a detailed scenario of the steps involved.

(36) Interrogative channel: Heine and Kuteva (2006, p. 209)

Stage 1 The marker begins in lexical gap questions.
Who *came?*

Stage 2 The marker is extended to introducing indefinite subordinate clauses.
I don't know ***who*** *came.*

Stage 3 The marker is extended to definite subordinate clauses.
You also know ***who*** *came.*
These structures may be interpreted as headless relative clauses.

Stage 4 The marker is extended still further to headed relative clauses.
Do you know the woman ***who*** *came?*

Mohawk shows clear evidence of these first three stages.

Each of the markers of free relatives described in the previous section appears in Stage 1 of the Heine and Kuteva scenario: simple content questions. The particle *ónhka*' 'who' occurs on its own or in a distributive form *onhkahrè:shon* 'who all'.

(37) **Ónhka'** *nontà:re*'?
onhka' n-onta-hr-e-'
who PRT-CSL.FAC-M.SG.AGT-go-PFV
'**Who** came?'

An interrogative particle *oh* precedes *nahò:ten*' 'what', but it is often dropped.

(38) (**Oh**) ***nahò:ten'*** *tesatonhontsó:ni?*
oh naho'ten' te-sa-at-onhontsio-ni
what thing DV-2SG.PAT-MID-want-BEN
'**What** do you want?'

An interrogative particle *ka*' precedes *niká:ien*' 'which'.

(39) ***Ka'*** ***niká:ien'*** *tesatonhontsó:ni?*
ka' ni-ka-ien-' te-sa-at-onhontsio-ni
wh PRT-N.AGT-lie-ST DV-2SG.PAT-MID-want-BEN
'**Which one(s)** do you want?'

The same interrogative particle *ka*' precedes *nón:we* 'where'.

(40) ***Ka'*** ***nón:*** *nisewèn:teron*'?
ka' nonwe ni-sewa-i'teron-'
wh place PRT-2PL-reside-ST
'**Where** do you all live?'

A particle *tó* 'how much/many?' appears in questions about quantities. *To ní:kon* asks about the amount of a mass or the number of inanimate objects, and *to nihá:ti* and other forms based on the verb *-on* 'to number' ask about the number of people or animals.

(41) **To** ***ní:kon*** *tesatonhontsó:ni?*
to ni-ka-on te-sa-at-onhontsio-ni
how.much PRT-N.AGT-amount. DV-2SG.PAT-MID-want-BEN
'**How much** do you want?'

(42) **To** ***nihá:ti*** *tho* *wahón:ne*'?
to ni-hati tho wa-honn-e-'
how.many PRT-M.PL.AGT there TRL-M.PL.AGT-go-ST
'**How many** (people) are going?'

All of these forms are used pervasively in Stage 2 constructions of the Heine and Kuteva scenario as well: embedded questions and other indefinite subordinate clauses.

(43) a. *Iáh* *tewakaterièn:tare'* ***[ónhka'*** *tahón:ne']*.
iah te-wak-ate-rien'tar-e-' onhka' ta-honn-e-'
not NEG-1SG.PAT-MID-know-EP-ST who CSL-M.PL.AGT-go-ST
'I don't know [**who**'s coming].'

b. *Wa'kheri'wanón:tonhse'* ***[ónhka'*** *tahón:ne']*.
wa'-khe-ri'wanonton-hs-e-' onhka' ta-honn-e-'
FAC-1SG>FI-ask-BEN-EP-PFV who CSL-M.PL.AGT-go-ST
'I asked her [**who**'s coming].'

c. *Iáh tewakaterièn:tare'* ***[(oh) nahò:ten'*** *tesatonhontsón:ni]*.
'I don't know [**what** you want].'

d. *Iáh tewakaterièn:tare'* ***[ka' niká:ien'*** *tesatonhontsón:ni]*.
'I don't know [**which one**(s) you want].'

e. *Iáh tewakaterièn:tare'* ***[ka' nón:*** *nisewèn:teron']*.
'I don't know [**where** you live].'

f. *Iáh tewakaterièn:tare'* ***[to ní:kon*** *tesatonhontsió:ni]*.
'I don't know [**how much/many** you want].'

g. *Iáh tewakaterièn:tare'* ***[to nihá:ti*** *thó wahon:ne']*.
'I don't know [**how many** are going].'

The same indefinite pronouns are used in the Stage 3 constructions proposed by Heine and Kuteva, in definite subordinate clauses. The interrogative particles *oh*, *ka'*, and *to* seen in Stage 1 and Stage 2 constructions are often replaced with *tsi*, however.

(44) a. *Wa'khehró:ri'* ***[onhka'*** *tahón:ne']*.
wa'-khe-hrori-' onhka' ta-honn-e-'
FAC-1SG>FI-tell-PFV who CSL-M.PL.AGT-go-ST
'I told her [**who**'s coming].'

b. *Wakaterièn:tare'* ***[ónhka'*** *tahón:ne']*.
wak-ate-rien'tar-e-' onhka' ta-honn-e-'
1SG.PAT-MID-know-EP-ST who CSL-M.PL.AGT-go-ST
'I know [**who**'s coming].'

c. *Wakaterièn:tare'* ***[(tsi) nahò:ten'*** *kenòn:we's]*.
wak-ate-rien'tar-e-' tsi naho'ten' ke-nonhwe'-s
1SG.PAT-MID-know-EP-ST that what 1SG.AGT-like-HAB
'I know [**what** I like].'

d. *Wakaterièn:tare'* ***[tsi niká:ien'*** *kenòn:we's]*.
'I know [**which one(s)** I like].'

e. *Wakaterièn:tare' [**tsi nón:** wahón:ne'].*
'I know [**where** they're going].'

f. *Wakaterièn:tare' [**tsi nihá:ti** thó wahón:ne'].*
'I know [**how many** are going].'

An interesting fact is that there is current variation between the use of the interrogative particles *ka'*, *oh*, and *to* and the particle *tsi* in constructions at this stage. Speakers feel that both are correct.

Heine and Kuteva note that their Stage 3 constructions, definite subordinate clauses, are sometimes reinterpreted as headless relative clauses, along the lines of *You know who came* > *You know the one who came*. These are precisely the structures seen in the preceding section on Mohawk free relatives.

Stage 4 of the Heine and Kuteva scenario, whereby the markers are extended from headless relative clauses to headed relative clauses, has not generally taken hold in Mohawk. A few instances of incipient structures can be found in the corpus, however. The last line of (45) could be interpreted either as a non-restrictive relative clause or simply an added thought.

(45) *Wa'akwatshenón:ni* *ne* *wa'akwaie:na'*
wa'-akwa-at-shenon-ni ne wa'-akwa-iena-'
FAC-1EX.PL.AGT-MID-become.glad-BEN ART FAC-1EX.PL.AGT-receive-PFV
'We were glad that we got'

kahiatonhsera'shòn:'a,
ka-hiaton-hser-a'-shon'a
N-write-NMLZ-NS-DISTR
'the letters,'

tsi ***nahò:ten'*** ***karì:wes*** ***ionkwarhá:re'***.
tsi naho'ten' ka-rihw-es ionkwa-rhar-e'
that what N.AGT-matter-be.long.ST 1PL.PAT-wait-ST
'something we had been waiting for for some time.'

Watshenní:ne' Sawyer, speaker

The sentence in (46) is from an account of the Pear Film[5]. The speaker had watched the brief film, which contains no language, then recounted what she had seen. The film was designed among other things to investigate strategies in different languages for keeping reference straight in challenging situations.

[5] The Pear Film was designed by Wallace Chafe in 1975 as a tool for comparing different languages without the intermediary of translation. Slightly less than 8 minutes long, it contains sound but no speech. It was engineered to provide examples of such things as referent tracking, event packaging, and more. Speakers of different languages are shown the film then asked to describe it to another person who has not seen it.

(46) *Kí:ken*,
kiken
this one,

raksà:'a	***tsi***	***niká:ien'***,
ra-ksa'=a	tsi	ni-ka-ien-'
M.SG-child=DIM	that	PRT-N.AGT-lie-ST

ne,
ART

rohianenhskwenhátie',
ro-ahi-a-nenhskw-en-hatie'
M.SG.PAT-fruit-LK-steal-ST-PROG

sok	*tontahó:ion'*	*ki'*	*ne*	*raonòn:warore'*.
sok	t-onta-ho-ion-'	ki'	ne	rao-nonhwar-or-e'
then	DV-CSL.FAC-M.SG>M.SG-give	in.fact	ART	M.SG.AL.POSS-brain-cover-ST

'This guy gave [the boy who was going along with the stolen fruit] his hat back.'
Annette Kaia'titáhkhe' Jacobs, speaker

The existence of such constructions, in combination with their rarity in speech, might provide a snapshot of a very early stage of development along the interrogative channel of relative clause constructions, from the Stage 3 to Stage 4 of the Heine and Kuteva scenario.

4. Nuance in the quest for explanation

Work in linguistic typology has been extremely valuable for exploring what all languages have in common, how they can differ, and possible correlations among variables. Recurring correlations can move us toward certain kinds of cognitive explanation, such as deeper generalizations or recurring patterns of development through time, as speakers extend a marker or structure from one domain to another.

Some work of this type can be enriched with a recognition of the fact that the categories and variables which are part of the typological toolkit are not always starkly categorical in individual languages. Examination of unscripted speech can be revealing, providing, among other things, snapshots of moments in the development of grammar, allowing us to refine our ideas about the precise order in which small changes might take place, and the circumstances which might facilitate those changes. These points were illustrated here with an examination of incipient relative clause constructions in Mohawk.

Elicitation of prototypical headed relative clauses in Mohawk via translations of English sentences is a simple matter. These appear to provide all one might need to check off typological boxes: they are head-initial, marked by a relativizer *ne:ne*, and finite. But such constructions are actually

extremely rare in Mohawk spontaneous speech. The particle *ne:ne* is not a dedicated relativizer. It usually functions as a general discourse anaphor, referring to an entity or idea established at some point in the previous context, or cataphorically to the referent of a following nominalized clause. Furthermore, it is not necessarily present in the few constructions translated as relative clauses, and speakers note that they do not feel that anything is missing from them. Overall, relative clause constructions do not appear to be well installed in the grammar.

Nevertheless, hints of incipient developments can be detected along the two pathways most frequently observed cross-linguistically: via demonstratives and interrogative pronouns. Among the set of processes listed in the demonstrative channel outlined by Heine and Kuteva (2007), the most robust one observable in Mohawk is prosody: the clause interpreted as a relative clause in translations is integrated prosodically with a preceding main clause. Among the four stages of development in the interrogative channel listed by Heine and Kuteva (2006), Mohawk shows the first three robustly, with a few possible faint instances of the fourth.

In sum, as opportunities are increasing for the careful examination of stretches of unscripted speech, it is becoming more possible to take a nuanced view of typological categories and variables, recognizing that they are not always as categorical as they may seem.

REFERENCES

ANDREWS, Avery. *Studies in the syntax of relative and comparative clauses*. New York: Garland Press, 1986.

ANDREWS, Avery. Relative clauses. In: SHOPEN, T. (ed.) *Language typology and syntactic description* II, 2nd edn. Cambridge: Cambridge University Press, 2007. p. 206-236.

ASHER, Nicholas; VIEU, Laure. Subordinating and coordinating discourse relations. *Lingua* v. 115, p. 591-610, 2005. DOI: https://doi.org/10.1016/j.lingua.2003.09.017

COMRIE, Bernard. Relative clauses. In: COMRIE, Bernard. *Language universals and linguistic typology*, Oxford: Blackwell, [1981] 1989. p. 138-164.

COMRIE, Bernard. Rethinking the typology of relative clauses. *Language Design*, v. 1, p. 59-86, 1998.

COMRIE, Bernard; ESTRADA-FERNÁNDEZ, Zarina (eds.) *Relative clauses in languages of the Americas: A typological overview*. Amsterdam and Philadelphia, PA: John Benjamins, 2012. DOI: https://doi.org/10.1075/tsl.102

COSME, Christelle. A corpus-based perspective on clause linking patterns in English, French, and Dutch. In: FABRICIUS-HANSEN, Cathrine; RAMM, Wiebke. *Subordination versus coordination in sentence and text*. Amsterdam and Philadelphia, PA: John Benjamins. p. 89-114, 2008. DOI: https://doi.org/10.1075/slcs.98.06cos

DOWNING, Bruce. Some universals of relative clause structure. In: GREENBERG, Joseph (ed.) *Universals of human language* 4, Stanford, CA: Stanford University Press, 1978. p. 357-418.

EVANS, Nicholas. Introduction: The comparability problem is central in typology. *Linguistic Typology*, v. 24, n. 3, p. 417-425, 2020. DOI: https://doi.org/10.1515/lingty-2020-2055

GIVÓN, Talmy. *Syntax: An introduction* II. 2nd edn. Amsterdam and Philadelphia, PA: John Benjamins, 2001. DOI: https://doi.org/10.1075/z.syn2

GIVÓN, Talmy. Toward a diachronic typology of relative clauses, 2009. Available at: http://www.ruf.rice.edu/~eivs/sympo/papers/complexrel108.pdf.

GIVÓN, Talmy. *The genesis of syntactic complexity: Diachrony, ontogeny, neuro-cognition, evolution*. Amsterdam and Philadelphia, PA: John Benjamins, 2009. DOI: https://doi.org/10.1075/z.146

HASPELMATH, Martin. How comparative concepts and descriptive linguistic categories are different. In: VAN OLMEN, Daniël; MORTELMANS, Tanja; BRISARD, Frank (eds.) *Aspects of linguistic variation*, Berlin: De Gruyter Mouton, 2018. p. 83-114. DOI: https://doi.org/10.1515/9783110607963-004

HASSELGÅRD, Hilda; JOHANSSON, Stig; BEHRENS, Bergljot; FABRICIUS-HANSEN, Cathrine (eds.) *Information structure in a cross-linguistic perspective*. Amsterdam and New York: Rodopi, 2002.

HEINE, Bernd; KUTEVA, Tania. The changing languages of Europe. Oxford: Oxford University Press, 2006. DOI: https://doi.org/10.1093/acprof:oso/9780199297337.001.0001

HEINE, Bernd; KUTEVA, Tania. *The genesis of grammar: A reconstruction*. Oxford: Oxford University Press, 2007.

HENDERY, Rachel. *Relative clauses in time and space*. Amsterdam and Philadelphia, PA: John Benjamins, 2012. DOI: https://doi.org/10.1075/tsl.101

KEENAN, Edward; COMRIE, Bernard. Noun phrase accessibility and universal grammar. *Linguistic Inquiry*, v. 8, n .2, p. 63-99, 1977.

LEHMANN, Christian. *Der Relativsatz: Typologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik*. Tübingen: Gunter Narr, 1984.

LEHMANN, Christian. On the typology of relative clauses. *Linguistics*, v. 24, n. 4, p. 663-681, 1986. DOI: 10.1515/ling.1986.24.4.663

MODER, Carol Lynn; MARTINOVIC-ZIC, Aida (eds.) *Discourse across languages and cultures*. Amsterdam and Philadelphia, PA: John Benjamins, 2004. DOI: https://doi.org/10.1075/slcs.68

DE VRIES, Mark. The syntax of relativization. 2002. Ph.D. dissertation, Universiteit van Amsterdam.

DE VRIES, Mark. The fall and rise of universals on relativization. *Journal of Universal Language*, v. 6, p. 1-33, 2005. DOI: https://doi.org/10.22425/jul.2005.6.1.125