EVIDENTIALITY:

The Linguistic Coding of Epistemology

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form which does not participate in the general syntactic or morphological system. The grammatical fixing of these constructions has produced simple sentences from complex sentences; simultaneously, it has complicated the grammar by introducing new morphosyntactic categories.

REFERENCES


Over the past century, we have learned much about the mechanisms of both grammatical and lexical change. Until now, however, there has been little opportunity to compare diachronic processes in these two areas of linguistic structure. Such a comparison would entail an understanding of the historical development of at least two functionally equivalent but formally distinct sets of devices, one grammatical, the other lexical. Evidential devices in the Northern Iroquoian languages present an opportunity for just such comparison. All of these languages are quite rich in both grammatical and lexical evidentials, some of them cognate across the languages, presumably reflecting a common origin and resistance to change, while others are unrelated, indicating areas of innovation.

In order to compare systems, it is necessary first to define them. Evidential markers qualify the reliability of information communicated in four primary ways. They specify the source of evidence on which statements are based, their degree of precision, their probability, and expectations concerning their probability.

The specification of the source of information communicated allows a speaker to abdicate some responsibility for its truth and permits the hearer to evaluate its reliability for him or herself. The statement may be based on inference. (‘I guess he doesn’t like Roquefort.’ ‘That dress must have been awfully expensive.’) It may be based on appearance. (‘He looks tired.’ ‘It smells like something’s burning.’) The source may be hearsay. (‘They say he supports six former wives.’ ‘I hear she has twenty-seven cats.’)

Another way to qualify the reliability of an utterance is to specify its degree of precision or truth or the appropriateness of a category label. The speaker may be willing to take responsibility for considerable precision or truth. (‘It hit

1 I am grateful to Wallace Chafe and Hanni Woodbury for their helpful comments on this paper.
me right here. "We were completely exhausted." Alternatively, the precision or truth may be hedged, for one of several reasons. The speaker may be unsure. ("It weighs maybe four pounds." "He is somewhere around fifty." It may be difficult to find a better label. ("He sort of crawled toward the door." "She's somewhere in France." Finally, the speaker may hedge because a specific distance from the center of a category is the best way to label something. ("It was nearly noon." "She was almost shouting.")

A third way to qualify the reliability of a statement is to specify the probability of its truth. ("The bakery is probably closed by now." "She may decide to return." 'It is highly improbable that Sam is our thief.') By hedging certainty, the speaker can again abdicate some responsibility for truth. If the bakery is in fact open, "she" does return, and 'Sam' is the thief after all, the speaker still has not lied.

Finally, a speaker may specify expectations concerning the probability of a statement. 'Sure enough' can indicate that an event was in accord with some expectation. ('Sure enough, Sam failed the lie detector test.') 'After all' can indicate a conflict with an expectation. ('Sam escaped after all."

In both English and the Iroquoian languages, a single marker often serves several of these functions, either simultaneously or with disambiguation from context. The context may be pragmatic, or linguistic, i.e. a slightly different construction. Consider English 'seem'. It can indicate that a statement is based on appearance. ('Sam seems tired.') This specification of source can hedge probability. I should not be surprised, or held to be lying if in fact Sam is not tired at all, but rather dislikes his companion. With a slightly different construction, 'seem' can indicate hearsay. ("It seems that Sam's in the hospital.") 'Must' can indicate both inference and high probability. If I look at your wet coat and say "It must be raining", I indicate both that I am convinced, and that my conclusion is based on inference. 'Suppose' can indicate both hearsay and inference. ("It is supposed to rain tonight." 'I suppose you won't visit your grandmother today."

Cayuga also has an inferential particle ρ. (The particle is currently migrating toward suffix status.)

'I think about three bags should suffice.'

This inferential particle is also used to hedge precision and certainty.

'1 think about three bags should suffice.'

'You perhaps forget?'

A Cayuga particle to:khês 'sure' can qualify degree, certainty, and expectation.

'I'm really hungry now.'

'this-time there so-he-did
Not unrelated to this synchronic fluidity is the fact that evidential markers shift among these four functions over time. Particles which signal one distinction in one language, will be cognate to markers in other languages with different evidential functions. The particle se' in Cayuga, for example, indicates that a statement is true and contrary to expectation.

(10) C. Häkyl: se'.
He is awake.

(11) C. O:né se' ak'ni:khó.'
already 1-sewed-it
I already sewed it.' (So don’t tell me to do it now.)

In Oneida, however, this particle emphasizes precision.

(12) Oe. Yäh se' thayekwe:n ñ:
not could-she-do-it
'She just could not do it at all.'

(13) Oe. Nv se' ok tayutdhsawv'.
then just she-began
'She started right in.' (She began right away.)

This synchronic and diachronic fluidity indicates that these distinctions should not be treated in isolation from one another, but rather must be considered components of a single, complex system.

Now, in order to identify linguistic change, one must compare at least two stages in the development of a language or family. To compare changes, it is necessary to compare comparisons, which requires more stages. As can be seen in Figure 1, the nature of the genetic relationships among the Northern Iroquoian languages permits the reconstruction of five different stages in the development of the family: Proto-Northern-Iroquoian (PNI), Proto-Lake-Iroquoian (PLI), Proto-Inner-Iroquois (PII), Proto-Western-Iroquois (PWI), and Proto-Eastern-Iroquois (PEI).²

Figure 1. Genetic relationships among Northern Iroquoian languages

functionally equivalent sets of devices will be traced: evidential affixes, predicates, and particles. It will be shown that they differ significantly in their resistance to change, and that these differences may be attributed to their forms.

EVIDENTIAL AFFIXES

The Northern Iroquoian languages contain several morphological devices for indicating the reliability of predications. They appear to be quite stable over time, perhaps due to their status as members of closed sets.

All of the languages share a cognate tense system which distinguishes past punctual, future punctual, and optative punctual events. The future and optative markers also serve to distinguish the probability of events which have not yet occurred. The future prefix, PNI *e- (T., Oe., M. -v-, W. e-, S., C. e-) indicates that an event is considered certain to happen. The optative prefix, PNI *aː- /aʔ- (T. aː- /aʔ-, W., Oe., M. aː- /aʔ-, S., C. aː- /aʔ-) indicates that it might, should, or could occur. (The favored reading depends upon the meaning of the verb and the context.) Compare the pairs of verbs below.³

² For clarity, Figure 1 shows only those languages considered in this paper. Another Inner Iroquois language, Onondaga, is well documented, but, because of its relationship to the other languages, its inclusion here would not contribute to the arguments presented. Other Northern Iroquoian languages, Susquehannock, Huron, Erie, Wenro, Petun, Neutral, and Nottoway, are not sufficiently well documented textually to shed light on comparative evidentiality.

³ The data throughout the paper are from the following sources. The Tuscarora, abbreviated T., is from the late Edith Jonathan and the late Elton Green, of Lewiston, New York. The Wyandot (W.), now extinct, is drawn from texts recorded by Marius Barbeau in 1911–1912 and published in Barbeau (1960). The Seneca (S.) is from Myrtle Peterson, of Steamburg (Allegany), Sandy Crouse, of Salamanca (Allegany), Hazel Thompson, of Steamburg (Allegany), and from Chafe (1967). The Cayuga (C.) is from Reginald Henry and Jim Skye of Six Nations, Ontario. The Oneida (Oe.) is from Richard Chrisjohn of Red Hook, New York, Winnie Jacobs, of...
The future prefix also occurs with events which are considered predictable because they happen so often or because they are the recognized effect of a cause.

(20) T. yôhrôku' arôh ykheyatkâhri'ô. 'He will go home if I tell him to.'
(21) W. Têhsou ndayêmêq eyo:naqht wâ:ja. 'If you go back, I will give you a little of mine.'
(22) S. K:uyô' qwoqaki:anqôi'he't o'ne wâ:ye gke'sehtâ:ni:nqô'. 'When I will-be-rich then before I-will-car-buy When I'm rich, I'll buy a car.'
(23) C. Kanôhskô: egh:ne:sê:k kye:kwâ' gystâ:qti. 'We'll stay indoors if it rains.'
(24) Oe. Kâ'ikô ná yetshiyokâ'ha kanyô ykselheke' kwâh ikô this they-you-child if you-will want very it yho'ti nikuhlahuinâ'hâke' kvh thro' koti' ni:yô tôm my:nd-minds-will-be-strong here there so such that yhuwatinêqni. 'they-will teach them

The optative is used with irrealis constructions.

(28) T. Thâka'nyô:rvô yutô:yvô. 'I wish it were sunny.'
(29) T. Arôh arkweatsâ'ku:k akhnhâ:ya:ti. 'If I were rich, I would buy a house.'
(30) W. Tq'q nô: u:saskâ:që. 'You would not have pitied me (if you had won).'
(31) C. A:kate:kho:nî kye:kwâ' a:yokê:khwânô:t. 'She would-feed-me 'If she would-feed me if she offered something me.'
(32) Oe. Nê: ki' svn usahô:nô:yake, autô: nê: ayutnô:lyâhë the just he-would-marry it-would-be the she she would play o:stä:ha sha:kô'yi:ha. a little bit his-daughter 'If he were to remarry, his daughter could play a little.'
(33) M. Toka' a:yetshiyonarâ':u, kati' nû:wâ' a:yetshiyaterâ' swâ:wi'. if you-had-addressed-a-word-to-her perhaps maybe she-might-have-given-you-good-luck 'If you had spoken to her, she might have given you good luck.'
The factual could of course be considered the most certain of all, since it describes events which have already occurred.

Another prefix which reflects the speaker's knowledge about the truth of a predication is the contrastive prefix PI *1ft-. It can be used to indicate that a state is contrary to fact or expectation.

(34) S. *a:katq:ni' a:ke' *seha:nii:ng' nāːj: I-were-rich I-would-car-buy EMPHATIC-CONTRASTIVE 'If I were rich, I would buy a car.'

(35) C. I:  a:khfr:ni' kyː:kwāː the'ak'yatahni:yoh. I-I-would-build if my-body-were-strong

(36) Oc. . . . ta thvwa'k2a'skō:kwate, if were-it-to-crawl-into-my-nest.

(37) Oc. otku' ki' nēː thvkaya:ku' yehsa:ku.

snake just it-it so-will-it-come-out-of-there in-her-mouth

'A snake will come out of her mouth.' (unexpected event)

(38) M. (What are we going to do about this hole in the pipe?)

Thvkkoht) ḋroke'.

'I will just plug it up.' (contrary to all you might expect me to do like calling a plumber or replacing the pipe.)

Thyōjka'.

'It will just leak.' (Contrary to your expectation that it will be fixed.)

This same contrastive prefix is also used to hedge the degree of truth. In Cayuga, it co-occurs with the diminutive -ah in this function.

(39) C.  thihak'ako:waːhah 'he is sort of handsome' (haksa'ko:wağ 'he is handsome')

(40) C.  thihak'sastë:ah 'he is sort of strong' (ha'sastē' 'he is strong')

(41) C.  thihowayinhó:haː 'he is sort of good at it' (howayinhō' 'he knows how')

(42) M.  tsi ne thihaxśáxtast 'he is sort of strong' (tā'shāxtast 'he is strong')

(43) M.  tsi ne thiha:nv:yes 'he is sort of tall' (rahv:yes 'he is tall')

The diminutive suffix, which is cognate across all of the languages, is also exploited alone in Cayuga and Seneca to hedge degree. Suffixed to stative verbs, it can add the meaning 'a little'.

Finally, the plural suffix -ṣhpg:oh, which is cognate within the Inner languages, is exploited in one of them, Cayuga, to hedge numbers.

(48) C.  Ha:wa:kypkōk kyː: q hneːː təkr7'shpg:oh.

'I guess I would get there by around eight o'clock.' (tekr7' 'eight')

(49) C.  o:h yei'ṣhpg:oh oːtahsəː:

'm six-ish you should come 'Oh, you should come around sixish.' (hieìi' 'six')

The morphological devices which provide information about the reliability of the message are thus quite stable across the languages. The tense systems have remained intact in both form and function in all of the Northern Iroquoian languages. The contrastive prefix has remained in the Inner languages, although its function has been extended in Cayuga and Mohawk from simple contrast with expectation to a hedge on degree. The form of the diminutive and its primary function have remained the same in all of the languages, but the Western languages (Seneca and Cayuga) have innovated a secondary evidential extension of its meaning. Finally, the pluralizer, which is cognate among the Inner languages, has been extended in Cayuga to qualify numbers.

**PREDICATE EVIDENTIALS**

Iroquoian languages, like most, contain numerous overt predicates which specify the source and quality of the evidence on which information is based. A majority of these ('think', 'say', 'tell', 'certain', 'true', etc.) are cognate across the languages. As throughout the rest of the lexicon, the most closely related languages share the most cognates, the most distantly related languages slightly fewer. Here are some examples of their use.

(50) T. Kyē:rih  uk'y vłoka' thā:yä't.

'I think other I-will-hang-again

'I think I'll hang another drape.'

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It-proved-it this it-says-true that so-it-happened
'This proved that it had truly happened.'

(52) W. Tiswa'yé'q' a'yę́ŋq̓aʔ de hūdá'me' daq̓ n̓p: yawałshih.
much-likely she-said the his-mother perhaps it-is-good
'His mother said that it was likely that it would be good.

(53) W. Yatúčy̕h teq̓ unq̓ šl' ndi'.
it-is-certain not-to-her-it-is-long
'She certainly did not find it long.'

(54) W. Kari:wa'y̕ah esq̓am̑á tur̓:q̓a
matter-is-sure he-will-find-us
'He is sure to find us.'

(55) S. Ak̓ámłq̓a'q̓ g̑e'te'
I-know he-will-come
'I know he is coming.'

(56) S. Ha:w̕e' g̑e'te'
hé said he-will-come
He said he would come.

(57) S. Okw̕e:n̓y̕a n̓e': k̓w̕á e:yə̓n̓q̓e':ni'.
ii-is-possible just-really I-will-beat-him
'I just might beat him.'

(58) C. Tekekał̓n̓e': ay̕e': onuł̓ток̓q̓ę̓ky̕e' k̓ay̕ə̓thwahshq̓o'
I-am-looking it-seems they-are-growing they-are-planted
'I see your plants are growing.

(59) C. Hem̓at̓o hon̓ił̓q̓eh.
they-say he-borrowed it
'They say he borrowed it.'

(60) C. Tk̓a:k̓ōt̓ h̓n̓e': teł̓ h̓i'y̕e'.
it-is-certain this he-will-bring-it-back
'He is certain to bring it back.'

(61) C. Né': ne' t̓k̓ač̓ n̓ę̓ky̕e' hon̓q̓e'tq̓o'.
it-the-it-is-correct this he-knows
'It is true that he knows.'

(62) C. Ko'łt̓ q̓h n̓h̓e': takw̓o te kye'try̕o'.
I-mean INF. this this-side she-lives-there
'I suppose it is the lady over there.'

(63) Oe. Tu: tk̓a'y̕e':li' tho yah̓a:y̕u̓hwe.
and it-is-true there there-she-arrived
'And, in fact, she did arrive there.'

(64) Oe. Wa'l̓h̓i:tu ne'n okhwi:li' . . . kw̓eth ohl̓hwi:y̕e': ji'
he-said the-one bear just thing-good that
yu̕ki' sh̓vni:ne'.'

Mithun: Evidential Diachrony In Northern Iroquoian

They-will-beat-us
'The bear said, "It is a sure thing that we're going to get cleaned
up."'

(65) Oe. Wé:n̓e' wi: n̓i: ji' vske' sh̓v̓:hnu.
it-is-evident so-very that you-will-beat-me
'It is evident that you will get the best of me.'

(66) M. Wé:n̓e' k̓i' w̓aÁ̓ e' t̓sí vske' s̓á'n̓i'.
it-is-evident-of-course that you-will-beat-me
'It is evident that you will get the best of me.'

(67) M. Tsi n̓cy̕at t̓sí yu̕k̓ih̓t̓ró: y̕ah úbka' ne w̓v̓:tu̕ so-so-it-is that we-are-told not anyone the ever
teyot̓:l̓ u a:y̕o̕t̓h̓r̓ó: r̓í' ne oh nihaya't̓o:tu.
it-happens they-would-tell the what so-his-body-kind-is
'And so, we are told, no one was ever able to tell what kind of body he
had.'

(68) M. Kh:Á̓ me k̓ t̓á':a tehāy̕s̓k̓a'ks.
I-think this maybe he-is-chopping-wood
'I believe he is out chopping wood.'

Since such predicates are often part of core vocabulary, it is not surprising that
they should show a high degree of stability. Many of them have remained intact
in all of the languages. (See, for example, *tk̓a'y̕e':ri: 'it is correct', *rihw-tyo:
'certain', *-tok̓e: 'certain', *-q̓e'n̓q̓e': 'know', *-ihr̓-ehr̓: 'believe', 'think',
*-hr̓ori: 'tell', *-at̓q̓-/-at̓q̓-/- 'say') They do not, of course, form a closed set,
and perhaps for this reason are not as static overall as the set of evidential affixes.

EVIDENTIAL PARTICLES

A third set of evidentials consists of particles, morphologically unanalyzable
words usually consisting of only one or two syllables. The languages vary
considerably in their repertoires of evidential particles. They are conspicuously
rarer in Tuscarora than in the other languages, for example, probably totaling
around half a dozen. Wyandot also seems to have had relatively few, in com-
parison with the rest of the family. Since all of our knowledge of Wyandot comes
from texts recorded longhand, a process which often serves to eliminate particles
as speakers slow down and transcribers speed up, we can of course only speculate
on their frequency. Oneida and Mohawk speakers draw from a significantly
larger repertoire of evidential particles, although there is considerable variation
from speaker to speaker in the extent of their use. Seneca and Cayuga speakers
have extremely rich sets at their disposal, which they exploit extensively in all
styles of speech. Cayuga alone has well over fifty different evidential particles.
The languages vary not only in the size of their repertoires, but also in their content.\(^4\)

**Source of Information**

Because of their brevity, it is generally difficult to reconstruct particles with confidence. In any case, because of their absence from Tuscarora, no evidentials qualifying the source of information can be reconstructed for Proto-Northern Iroquoian. The Lake languages Wyandot, Seneca, and Cayuga share a cognate experiential particle \(a:ya:^c\) which indicates that information is based on observation.

\[\begin{align*}
(69) & \quad W. \quad De \quad ya^\text{g}{}uyom^\text{e} \quad a:ya^c \quad usk^\text{a}{}taye'. \\
& \quad \text{the it-was-bloody it-appears its-head-on} \\
& \quad \text{‘His head looked bloody.’}
\end{align*}\]

\[\begin{align*}
(70) & \quad W. \quad A'atijîh \quad tehatâka \quad da:ya^c \quad dâkstî' \quad ta'îh \\
& \quad \text{not-it-looks he-talks the-as-if that something} \\
& \quad hu'di:ya^c:îq^c'. \\
& \quad \text{his-mind-is-troubled} \\
& \quad \text{‘He remained silent. He seemed troubled.’}
\end{align*}\]

\[\begin{align*}
(71) & \quad W. \quad Ne \quad ha:Mot \quad da:ya^c \quad du \quad tâ:ya:va:skâp^c:te. \\
& \quad \text{now he-hears the-it-seems that someone-is-walking} \\
& \quad \text{‘It sounds as if someone is walking around.’}
\end{align*}\]

\[\begin{align*}
(72) & \quad S. \quad A:ya^c: \quad te'o:yâi \quad ne \quad kâ:ne' \quad ahsqô. \\
& \quad \text{it-appears not-is-it-ripe the cherry yet} \\
& \quad \text{‘The cherries don’t look ripe yet.’}
\end{align*}\]

\[\begin{align*}
(73) & \quad C. \quad A:ya^c: \quad wahe' \quad q \quad tshô: \quad oqâko:htî \quad te:wa:htî:ts. \\
& \quad \text{it-appears just INF. only it-passed two-ears-are-long} \\
& \quad \text{‘A deer must have just passed by here.’ (I see the tracks.)}
\end{align*}\]

\[\begin{align*}
(74) & \quad C. \quad A:ya^c: \quad te:wa:htî:ts. \quad q \quad gwâ:wqâ:k. \\
& \quad \text{it-appears two-ear-are-long INF. we-will-eat-meat} \\
& \quad \text{‘We must be having venison for supper.’ (I can smell it.)}
\end{align*}\]

\[\begin{align*}
(75) & \quad C. \quad A:ya^c: \quad sâhsâ:kha'. \\
& \quad \text{it-appears you-limp} \\
& \quad \text{‘You seem to be limping.’}
\end{align*}\]

The Seneca particle is also used for inference based on observation of a situation.

\[\begin{align*}
(76) & \quad S. \quad Ta: \quad o:nê \quad ne: \quad kyô'q \quad ne \quad hâksâ'tâse' \quad a \quad waq' \quad \\
& \quad \text{and then really they-say the he-is-a-new-child he said} \\
& \quad \text{He said ‘and then really they-say the he-is-a-new-child he said’.}
\end{align*}\]

\[\begin{align*}
(77) & \quad S. \quad Tóta:ya^c: \quad shô \quad a:ya^c: \quad kwa \quad t:\quad \\
& \quad \text{I-should-give-it-back-to-him only it-seems just I} \\
& \quad \text{‘It looks like it would help us for me to give it back to him.’}
\end{align*}\]

Wyandot, Seneca, and perhaps Cayuga or Mohawk share an inferential particle which indicates that the information is the result of deduction.

\[\begin{align*}
(78) & \quad W. \quad (\text{Some hunters have just found some large, unusual claw marks on a tree.}) \\
& \quad Tô'q \quad ne: \quad te'yawâ:stî \quad de: \quad kwâ:kâ:jâtô'. \\
& \quad \text{no maybe not-is-it-safe that we-trouble-it} \\
& \quad \text{‘Maybe we had better not disturb it.’}
\end{align*}\]

\[\begin{align*}
(79) & \quad W. \quad (\text{A friend has just informed the speaker that horses do not hatch, but} \\
& \quad \text{rather bring forth their young. He has just bought a pumpkin.}) \\
& \quad Ne \quad tu \quad tâ:he' \quad ne \quad no: \quad abaye' \quad di:ya:htâ:q'. \\
& \quad \text{now there sure the INF. he-cheated-me} \\
& \quad \text{‘Then he must have cheated me!’ (when I bought the horse egg)}
\end{align*}\]

\[\begin{align*}
(80) & \quad S. \quad no: \quad te'o:yâi \quad ne \quad kâ:ne'. \\
& \quad \text{I-guess not-is-it-ripe the cherry} \\
& \quad \text{‘The cherries must not be ripe.’ (because the strawberries are still out)}
\end{align*}\]

\[\begin{align*}
(81) & \quad S. \quad A:ya^c: \quad ni' \quad i:wî: \quad hohtô': \quad no: \quad wîhdâ:k \\
& \quad \text{it-seems I-think wizard I-guess too-much} \\
& \quad \text{ha'te:yô: \quad hayte:ih.} \\
& \quad \text{diff.-things he-knows} \\
& \quad \text{‘He seems to be some kind of a wizard; he knows too much.’}
\end{align*}\]

\[\begin{align*}
(82) & \quad C. \quad Têhâ:ya^c: \quad \emptyset \quad hne: \\
& \quad \text{he-will-bring-it-back INF. this} \\
& \quad \text{‘I guess he’ll bring it back.’}
\end{align*}\]

\[\begin{align*}
(83) & \quad C. \quad Tê'hô: \quad \emptyset \quad hne: \quad t'eshe: \quad kâ:yâ:thâ' \\
& \quad \text{not INF. this not-you-want it-body-sets} \\
& \quad \text{hâ:se'.} \\
& \quad \text{there-would-you-go} \\
& \quad \text{‘You don’t want to go to the movies then, do you?’}
\end{align*}\]

\[\begin{align*}
(84) & \quad M. \quad Ne \quad ki' \quad ki:kv \quad Ahkwsâ:shî:ro'nu: \quad \emptyset \quad thê:nv \quad ki' \quad nà':a \\
& \quad \text{the just this St.-Regis-resident something just I-guess} \\
& \quad yahô:rî:wâ:n:to:hse' \quad awahô:yô:nu \quad \emptyset \quad ne \quad ra:hâ:tsî. \\
& \quad \text{he-asked-for he-would-give-him the he-is-black} \\
& \quad \text{‘I guess the St. Regis man must have asked the black fellow to hand}
\end{align*}\]

\[^4\] Three other papers describing particles in Northern Iroquoian languages are of note here. Two, by Wallace Chafe (1981a, 1981b), deal with Seneca particles. The third is on ‘Cohesive and grammatical functions of selected Onondaga particles’ (Woodbury 1980)
him something.' (Speaker infers a bridge between remembered events.)

(85) M. Khe:rv ki:nú:a ta’ ni’wa akkwen:ni.
I-think I-guess maybe perhaps I-could
‘I guess I just might be able to do that.’

(If the particle, *nqö:, is a combination of the article ne’ plus ρ:, the Cayuga ρ could be related; if not, the Mohawk ná’ could be related, in accord with other observed but unsystematic correspondences between -a-a- and -o- sequences.) An Oneida particle, uhne, resembles a compound of the Cayuga inferential plus deictic.

(86) Oe. Khale’ onó uhne wahv:lu’ skvhanáksv, and now it-seems he-said one-it-skin-bad
‘Tutahsansitaskwak . . .’
jump-up
‘Finally said the fox, it seems, “Jump up now.”’

(87) Oe. Nv uhne lotumuáltu’ ka’ikv skvhanáksv kwatokv
now it-seems he-wait this one-it-skin-bad really
akawi:sárvste’ lvitkne.
it-would-ice-become-thick
‘And so it seems the fox waited for the ice to become really thick.’

Mohawk also contains another inferential particle. It usually entails a hedge on probability. The inference may be based on observation.

(88) M. Oskvni:tu ta’ yotohésstu.
deer possibly it-has-passed
‘A deer must have passed by here.’ (I see tracks.)

(89) M. Khe:rv kv ta’:a oskvni:tu owar:ru ñtwake’
I-think that possibly deer meat we-will-eat
vyó:karahe:.’
it-will-darken
‘I think we must be having venison tonight.’ (I smelled it as we walked in.)

The Inner languages all make extensive use of quotative particles. The Cayuga, Oneida, and Mohawk particles are cognate, while the Seneca quotative is quite different in form.

(90) C. Akonphyá’k aké’.
she-got-hurt they-say
‘I heard she got hurt.

(91) C. Thayekya’kho:á’ aké’.
he-went-to-chop-wood they-say
‘They say he went to chop wood.’ (It seems he went to chop wood.)

(92) Oe. Okhna’ yaky: wí: wa’ta’tahwéli’. and-so they-say he-traveled-around
‘And, so they say, he travelled around.’

(93) Oe. Né: kati’ yaky: wí: alyá: ny yah
it is they-say that-is-why now not te’shvatshute’ ohkwa:li.
has-he-a-tail bear
‘That’s the reason, it is said, that the bear has no tail.’

(94) S. Spkó:’ kyp’ ô te:niska’a: hátiya’taht’ô sqx:te’. Berrino someone they-say two-children they-are-lost last-night
kyp’ô hiyá:sq. Chickchick kyp’ô koks’a’ta’shô:gh. they-say their-names they-say her-children
‘I heard that two kids were lost last night. Berrino I guess their names were. Must be Chickchick’s children.’ (from a conversation)

(95) S. Ta: oné né: kyp’ô sq no:n:ta’ oné kyp’ô
and then really they-say 3 so-days then they-say
wa:xq:ô né hq:kwh.
he-arrived the man
‘And then, it seems, after about three days, it seems, a man appeared.’
(from a legend)

Precision or Degree of Truth

Particles emphasizing the degree of truth look similar in almost all of the languages. One emphatic may be traceable to Proto-Northern Iroquoian.

(96) T. Yahwahn’ni’ ut’éxnakw ha’ kyu thr’na’nìhrw.
there-she-throw it behind the right there-he-was-standing
‘She threw it right back where he was standing.’

(97) W. Ke e’rít ahátome’.
very much he-is-tired
‘He is very tired.’

(98) W. Ke ne’ hatängidhe:’.
just now he-will-be-through
‘He is almost through.’

(99) C. Tho ki’ nhó:weh, ha’teykwa’ta:te.g:
there just place there-we-have-seen-each-other
‘That is just where we met.’
The resemblances between the languages could represent a common Proto-Northern-Iroquoian inheritance, but this cannot be determined rigorously. (The difference in the vowels could indicate two original particles, *kê* > T. *kê*, W. *kê*, and *ki* > C.–Oe.–M. *ki*, or they could be divergent realizations of a longer sequence, such as *kaɪ* [PNI *a + *i > ĝê]. Normally initial *k* is lost in Wyandot before vowels, but the nonexistence of the expected form W. *ki* could be explained simply as avoidance of an unstable shape. In any case, the brevity of the forms significantly raises the possibility of chance resemblance.)

The Lake languages share other emphatic particles, kwah and akwah, 'really', 'just', 'very'.

Additional hedges exist in most of the languages, but they do not appear to be cognate across languages.

**Probability**

All of the languages have particles which qualify certainty, in many cases matching hedges on precision or conditionals. (As in T. arvh 'about', 'maybe', 'if', C. kye:kwa 'maybe', 'if', M. toka' 'about', 'if'). These are generally not cognate across the languages, although the Eastern languages Onondaga and Mohawk share several.
Evildentity in North and South America

   this just perhaps I-should-climb tree-on
   'I guess I will climb this tree here.'

(118) M. Raw'é:ras ute' thlé kv ró:ne' wa'etshí:kv'.
   he-thunders perhaps that his-wife, you-saw-her
   'Perhaps you saw the Thunderer's wife.'

   might-as-well perhaps there there-she-should-go
   'Well, maybe she should go.'

(120) Oe. Tá:tu nuá' ne: tóyánle'.
   perhaps maybe that it-is-good
   'Maybe it would be best.'

(121) M. Káti' ni:wa' a:yetshyatera'swá:wi'.
   perhaps maybe she-might-have-given-you-luck
   'She might have given you good luck.'

(122) Oe. Nv káti' vkatáhswávv' vkahtákú:ní:n.
   now maybe I-will-begin I-will-shoe-make
   'Now, I guess, I'll start to make some shoes.'

(123) M. Káti' né: wá:e:ru?
   perhaps that she-said
   'Perhaps that is what she said?' (Is that what she said?)

A Tuscarora particle resembles these but is not cognate, since *t becomes 'n in Tuscarora before vowels. The cognate form is *kweni? 'possible'.

(124) T. Kwéti' vnyúrtúhv a:sí:áh.
   maybe it-will-boil a-little-bit
   'Maybe it will boil a little.'

Although all of the other languages contain additional particles which qualify the probability of statements, they are not cognate.

Expectation
The Lake languages all contain particles indicating correspondence to expectation. One set is derived from a verb *-tokhé. 'be certain'. It remains only as a full predicate in Wyandot (see 53), but has spawned particles in all of the Inner languages which indicate that a statement is both true and in accord with expectation.

(125) S. To:késh akekwe:nyó: gkó:ké's ne
   sure it-is-possible-for-me I-will-find-for-you the
   yeksá'ko:wa:h.
   she-child-large
   'Yes, I will certainly be able to find a beautiful girl for you (as you suggested).'

(126) C. To:késh a'akowi:yá:ta'.
   sure she-came-to-have-a-baby
   And, sure enough, she did have a baby.'

(127) Oe. Tó:kyské
   'Yes, that is true.' (in response to a tag question, such as 'isn't it?)

(128) M. Tó:kyské.
   'It sure is.' (in response to a tag question)

Another emphatic particle pointing to expectation can be reconstructed for the Inner languages: *wahi/*wahé 'in fact'.

(129) S. Wái he níyá:wé'p̓ ̄h.
   in-fact what how-it-happened
   'This is in fact how it happened.'

(130) Oe. Wá'utw:kóh'te' ki' wá:h.
   she-passed just in-fact
   'Indeed, she kept right on going.'

(131) Oe. I: wá:h.
   I-EMPH. in-fact
   'In fact, I am.'

(132) Oe. Nv kwi wa'thóyá:tahkwe' vha:nehwáhní:ná:xte' ki'
   now just he-body-picked-up he-will-skin-sell just
   wá:h.
   in-fact
   'And in fact, he did pick him up to sell his hide.'

(133) M. O:nv wá:hi' wa'tkóthó' ne ravvč'í:yu.
   then in-fact she-looked-at the he-is-dead
   'Then in fact she did look at the dead man.'

   gosh just in-fact my-mind-set-again
   'Gosh, as a matter of fact, I completely forgot.'

Otherwise, particles indicating expectation generally do not match from language to language. Wyandot and Cayuga have particles indicating contrast with expectation which may or may not be related.

(135) W. Haka'tra' ihcé hu'kíyó:ru:wa:né.
   he-ventures it-is-so his-mind-is-great
   'He is in fact daring and clever after all.' (He has just surprised us with his good performance on a test.)
Other particles marking expectation of probability are not cognate from one language to the next.

Due to their brevity, tracing the source of Iroquoian particles in general can be only speculative at best. As the preceding section has shown, however, the languages vary strikingly in their repertoires of evidential particles. Tuscarora has only a handful, while Cayuga has well over fifty, and the other languages range between these extremes. Most of the evidential particles in use in the modern languages cannot be traced back to Proto-Northern-Iroquoian. Only one, *kë/*ki ‘just’ appears possibly reconstructable for PNI. A few can be tentatively reconstructed for Proto-Lake-Iroquoian, *a:ya: ‘it seems’, the inferential *nt: ‘I guess’, and the emphatic *kwah/*kwa:hs ‘really’, ‘very’, ‘just’. More evidential particles can be reconstructed for Proto-Inner-Iroquois. In addition to the experiential, inferential, and emphatic particles cited above, the quotative *y:u: ‘it is said’, the probability marker *-toksh: ‘sure’, and the marker of expectation *wahë/*wahi ‘in fact’ can be posited for PII. In addition to these, the Western languages share the qualifiers *thö:ha ‘almost’ and *tshö: ‘just’, ‘only’. The Eastern languages, slightly more closely related, share as well the probability markers *dhi: ‘perhaps’, *nu:wa ‘maybe’, and *käi: ‘maybe’. Each of the languages contains additional unique evidential particles which appear in none of the others.

The particles are clearly the least stable of the evidential devices. In a number of cases, changes involving particles can be observed in operation in the modern languages. Specific clusters of two or more particles have often taken on various idiomatic senses which vary from one language to the next. Languages with different internal and external sandhi rules show wavering treatment of such clusters. In Cayuga, for example, glottal stops metathesize to the left in all odd-numbered syllables except final ones. A monosyllabic particle like ki ‘just’, for example, retains its glottal stop word—finally because the first syllable is also the last. When combined with shê: ‘how’, however, the particle retains its individual form in slow speech but exhibits metathesis in fast speech: k’ishê: ‘perhaps’. Speakers are unsure of word boundaries in such clusters, although they tend to feel strong bonds between the elements and favor joining them in writing. Such ambivalent status of incipient clusters is apparent in the other languages as well. In addition, a number of particles, such as Cayuga tshi: ‘just’, and so ‘presumably’ appear to be becoming ever more closely bound phonologically to the predicates they modify, pointing toward incipient morphologization.

At the same time, all of the languages exhibit synchronic loss of syllables from verbs to form particles, and from bisyllabic particles to form monosyllabic ones. Some speakers are aware of both long and short forms, while others are no longer aware of the longer ones. Such a loss can be seen in the particles derived from PII *katö:ke: ‘it is certain, true, specific, exact’. The verb remains in its full form in all of the Lake languages (W. yatü:yë:s S. kato:kc:h, C. katö:kc: Oe. kato:kv M. katö:kv). In the Inner languages, however, the pronominal prefix *ka- ‘it’ has also been dropped to form a particle (S. to:kës, C. to:kghs, Oe. to:kske, M. to:sketö:kske ‘sure enough’).

The three types of evidentials in Northern Iroquoian differ significantly in their stability. Nearly all of the forms of the morphological evidentials have remained intact in all of the languages, as have most of their functions.

The predicate evidentials show somewhat less stability than the affixes, although the majority have remained in most of the languages. This is not surprising. While the affixes constitute a closed set, the predicates are part of an open set, subject to the same accidents of lexical replacement as the rest of the vocabulary. Because they are generally closer to the core of the lexicon, more frequently used and less culturally sensitive than some other words, they are among the more stable of lexical items. Their patterns of retention accurately mirror the history of the family. The most closely related languages share the most evidential predicates, while the more distantly related languages share somewhat fewer.

The evidential particles, on the other hand, show much greater volatility than either the affixes or the predicates, both in form and function. Where particles appear equivalent between languages, they often do not exhibit regular sound correspondences, and apparently similar forms often differ in function from language to language. The evidential particles mirror most dramatically the different degrees of relationship among the languages in the family. The most closely related languages share many, but by no means all of their evidential
particles. As degree of relationship diminishes, proportions of shared particles decrease sharply, until, in the case of the most distantly related languages, almost none are cognate. Repertoire and use of particles are in fact among the most salient ways in which the Northern Iroquoian languages differ among themselves.

It is not immediately obvious why evidential particles should be so much less stable than predicates, however, since both constitute open lexical sets. Several facts suggest an explanation. The frequent combination of evidential particles into long strings suggests that they must perform a function beyond simply specifying the degree of reliability of an utterance, which could often be neatly accomplished with a single, well chosen verb or particle. People credited with reputations as eloquent speakers tend to use more such particles, and more frequently, than less admired speakers. There is enormous speaker variation in choice and frequency of use. Furthermore, the particles seem in some ways to have low salience to speakers. If a speaker slows down for clarity or dictation, or writes out a text longhand, the particles tend to disappear. Teachers tend to omit them when teaching these languages to children or adults whose first language is English. Speakers are almost uniformly at a loss to translate most of them.

The distribution of the particles in discourse is quite interesting. As might be expected, they tend to cluster around specific statements which speakers would like to hedge, such as direct quotations or measurements. They tend to occur in very long strings particularly before shifts in topic, or around elements of high communicative value to the discourse. Their effect on the rhythm of information transmission is striking; they allow the speaker time to collect thoughts at moments of the greatest choice. In addition to facilitating the performance of the speaker, they contribute to the effectiveness of the communication. They allow the speaker to regulate the flow of information so as to be most easily and readily understood by the hearer. If too many short, highly important units of information were to occur in rapid succession, a hearer might not be able to take them in all at once with their proper force. Strings of particles permit the speaker to arrange important information such that it arrives at proper intervals.

Proper rhythm can also affect the hearer's willingness to listen. Plunging into a sentence can be considered brusque. The particles can soften the force of a communication. Consider this sentence:

(139) M. Khē rv kati' kā nekwd: yā:ке'.
I-believe maybe there side there-I-go
'Well, I might as well go on over there, I guess.'

The first two words are optional as far as propositional content goes. Speakers report, however, that if one or, worse, both were removed, the sentence would suggest disgust and dissatisfaction. The same is true of this Cayuga answer to the question, 'What are you doing?'

(140) C. A:ye' ki' 'hne': thē kwāhs skā'ho'tē'
it-seems just this not really anything
'Oh, nothing much, I guess.'

The speaker knows exactly what he is doing, but the bare facts, thē skā'ho'tē' 'nothing' would be an impolite, brusque answer.

Now in most cases, strings of evidential particles tend to be mixed with deictic particles. The deictic particles occur, in fact, much more frequently than is necessary to keep reference straight. Interestingly, Tuscarora, which exhibits fewer and rarer evidential particles than the other languages, exhibits correspondingly more deictic particles in discourse.

long-ago they-dwell real-people this this
neka: ku: tikvkā: rohrv.
here near they-dwell that their-minds-down
'Long ago, the Indians living near here were depressed.'

The deictic particles in all of the languages have the same secondary function as the evidential particles. They allow the speaker time to compose the utterance and permit an arrangement of information so that the hearer can process it most effectively. The use of evidential particles is thus more than a function of their evidential role. Their diachronic behavior is also a result of their form as particles.

The form of a linguistic marker can, then, have a significant effect on its resistance to change over time. The hierarchy of stability of evidential devices can be summarized as follows:

<STABLE>-AFFIXES-PREDICATES-PARTICLES-VOLATILE>

REFERENCES


Chafe, Wallace L. 1981b. Differences between colloquial and ritual Seneca, or how oral literature is literary. Reports from the survey of California and other Indian languages, No. 1, ed. by Alice Schlichter, Leanne Hinton, and Berkeley: Department of Linguistics, University of California.

Mithun: Evidential Diachrony in Northern Iroquoian

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The Jaqi family of languages, including Jaqaru, Kawki, and Aymara, is spoken in the Andes mountains of Peru, Bolivia, and Chile by approximately three million people. Jaqaru and Kawki are in modern contact, spoken in contiguous valleys in the Yauyos province of Lima, in Peru. Until my own work of the last quarter century there was no history of contact between the Aymara and the Kawki/Jaqaru group. The Kawki language is dying—it is not now the dominant language for anyone and no children are growing up with Kawki as a native language. Jaqaru, on the other hand, although spoken by only some five thousand, is still the first language of the children of Tupe; its demise is not imminent. Aymara, the native language of one-third of the population of Bolivia and of more than half a million in Southern Peru and Northern Chile, is expanding in absolute numbers; there are Aymara linguists, Aymara publications put out by Aymara authors, and a growing enthusiasm for bilingual education among Aymara parents.

Extensive marking of data-source is one of the prime characteristics of the Jaqi family of languages. However, the category was not even recognized in the first four hundred years after the conquest for the apparently simple reason that the specific marks of data-source are not directly translated within the translation tradition which quickly established itself after the conquest. With Spanish as the mediating language to English, there was no translation of the category into English either.

In 1603, Bertonio (p. 326) called the data-source markers ‘ornate particles’ because ‘without them the sentence is perfectly fine’. In 1616, Torres Rubio says that ‘some particles there are in this language which serve no other function than to adorn the sentence’ (p. 244). Ellen Ross in 1963 (p. 15) calls them ‘emphatic suffixes’. In 1965, Juan Enrique Ebbing (p. 360) calls them ‘suffixes of adornment and emphasis’. In 1967, Wexler, in the Peace Corps grammar (p. 2), claimed that one of the data source suffixes is an ‘optional “subject-object”'.