External triggers and internal guidance in syntactic development: Coordinating conjunction

Marianne Mithun

Causes of linguistic change have traditionally been classified into two types: internal and external. Frequently cited internal causes of change include such factors as speakers’ preferences for simple and transparent systems, which can prompt learners to remodel apparently irregular or opaque paradigms. The most commonly cited external cause of change is language contact. While the distinction between internal and external causation may be clear-cut in some cases, the separation of these factors is not always straightforward or even desirable, particularly in the area of syntactic change.

Much syntactic development is driven by an interplay between internal and external factors. Grammaticization may seem to reflect a purely internal process: the cognitive routinization of patterns of expression. Yet structures are not grammaticized randomly. Speakers automate those structures they use the most often. Similarly, syntactic borrowing may seem to represent a purely externally caused development: it is dependent on external contact with other languages, under appropriate conditions of relative prestige and bilingualism. Yet aspects of the internal structure of the borrowing language can affect the facility with which a prospective loan is integrated.

Internal and external factors can be difficult to untangle because syntactic change is so often the result of their interaction. For the same reason, examining the effects of either in isolation can be a mistake if we are to make progress in understanding the causes of syntactic change. In what follows, this interaction will be illustrated with the reconstruction of a basic syntactic construction, coordination.
1. The mystery

The Iroquoian language family is indigenous to Eastern North America. Several languages spoken at the time of European contact have disappeared without textual documentation, but relations among the better known languages are usually represented schematically as in Figure 1.

(A diagram such as Figure 1 of course indicates the relative chronology of successive splits but does not capture subsequent contacts.)

The languages are not mutually intelligible, but they are quite similar in their morphology and syntax. They are highly polysynthetic, with elaborate sets of prefixes and suffixes, as well as noun incorporation, although incorporation is no longer productive in Cherokee. All Iroquoian verbs are finite and contain obligatory pronominal prefixes referring to their core arguments. In part because their morphology is so elaborate, their syntax is in many ways comparatively simple. Verbs frequently function as complete clauses in themselves.

The languages differ strikingly, however, in a basic syntactic construction: coordination. Conjunctions are not cognate across the family. Coordinate constructions are not even structurally equivalent: in some languages, conjunctions precede the final constituent, while in others, they follow. Coordination is also not grammaticized to the same extent in the languages: in some, full-fledged conjunctions appear systematically in coordinate structures, while in others they are marginal. How could languages that are otherwise so similar differ so radically in one of the most fundamental of all syntactic constructions? The circumstances behind this diversity are best understood when internal and external factors are considered together.
2. Coordination in Iroquoian

The first step in understanding the modern diversity is an investigation of its antecedents in the parent language. Several kinds of evidence indicate that syntactic coordination may not have been fully grammaticalized in Proto-Iroquoian. No coordinating conjunction can be reconstructed for the family as a whole, nor even for any of the subgroups. As noted above, the conjunctions in the modern languages are not generally cognate: compare Mohawk *tany*, Oneida *okhna?* or *okhale?*, Onondaga *ohni?*, Cayuga *hni?*, Seneca *kho?, Tuscarora *tisna?,* and Cherokee *ale* or *-hno*, all meaning ‘and’. Furthermore, most of the languages still exhibit some coordination by intonational linking alone, although the prevalence of this device in natural speech varies from one language to the next. Finally, historical documentation of some of the languages suggests that their current coordinating constructions are recent developments.

2.1. Mohawk

In modern Mohawk, a language spoken primarily in Quebec, Ontario, and New York State, syntactic coordination is usually signaled by the general conjunction *tany*(') ‘and’ before the final coordinate constituent. Like English ‘and’, *tany*(') can appear between all constituents. The conjunction can be seen between coordinate clauses in the passage in (1) from a Mohawk narrative. The translation is from the same speaker’s later retelling in English.

(1) Mohawk (Margaret Edwards, p.c.)

\[ \text{tsi } t\text{awakh}\text{t}e^h \text{t}e^h \text{h} \]  
\( \text{When I holler} \)
\( \text{‘When I holler “hey!”} \)
\( \text{\textbackslash a} \text{tehsanitskot}a \text{khwahte}^h \text{tan}y\text{ tshi}k_1 \text{ olokwa}h^a? \)
\( \text{you will jump up} \text{ and this chain} \)
\( \text{\textbackslash a} \text{tehsy}e^h \text{na}, \)
\( \text{you will grab} \)
\( \text{you jump up} \text{ and grab that chain,} \)
\( \text{ya}t\text{ahsani}^h \text{t}sy\text{ykhwa}h^k\text{we}^h \text{tan}y\text{ a} \text{tehshy} \text{wati}h^ah\text{tho}^h \text{.} \)
\( \text{you will jump up there} \text{ and you will boat pull} \)
\( \text{you jump up there} \text{ and pull the boat.”} \)

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Tanų is also used to conjoin nominals, as in (2).

(2) Mohawk (Margaret Edwards, p. c.)

Sok waʔtκ̱uhsι̱θoʔ naʔ ... rụtateʔkâʔokûʔa tanų so they cried really they are siblings and loʔnisti̱ha.

his mother

‘So then his mother and his sisters really cried.’

Although modern Mohawk speakers use tanų much like English ‘and’, the particle does not appear in every compound structure. The passage in (3), without conjunctions, occurred later in the story cited in (1).

(3) Mohawk (Margaret Edwards, p. c.)

Sok waʔthohâ: lehteʔ “hey”
then he hollered
‘So then he hollered “Hey!”,

tahayé:naʔ olokwâhšaʔ
he grabbed chain
( and ) he grabbed the chain,
yâ?thanîʔtsyûhkwahkweʔ shaʔtekanyâtaliʔhâ
he jumped away half of the river
( and ) jumped into the middle of the river.’

When she retold the story in English, the speaker supplied English conjunctions between the clauses. The same speaker conjoined the Mohawk nominals in (4) with intonation alone.

(4) Mohawk (Margaret Edwards, p. c.)

Kyôtkû yukwalaʔseʔokûʔa lotîʔnisti̱ha tahanuyhwêθaʔ.
always we are cousins their mother they overnight
‘Our cousins (and) their mother always used to spend the night.’

Coordinate constructions with tanų are relatively well established in modern Mohawk, but historical records suggest that this may be a surprisingly recent innovation in the language.

Much of the earliest documentation of Mohawk consists of word lists or liturgical materials translated into Mohawk by French priests. At the beginning of the eighteenth century, however, English-speaking mission-
aries began to write Mohawk and taught a number of Mohawk people as well. One native document that survives from this period is a collection of formal ceremonies, speeches, and songs, believed to have been written in the second half of the eighteenth century by a Mohawk chief, David of Schoharie (Hale 1883; Michelson – Natawe – Norton – Norton 1980). The manuscript contains some coordinate clauses conjoined by juxtaposition alone.

(5) Mohawk (David of Schoharie, in Michelson et al. 1980: 32.39)

Onenh kady watyakwaghsiharako
ómá kátti? wa'tyakwašihará:ko?
now therefore did we be blocked undo
‘Therefore now we unblocked

waahkwadweyendonh tsisaronkatah
wa'akwatweyá: tu' tsisahrykáttha?
did we keep where you understand language
cause do

(and) preserved your hearing’

The document also contains some connective particles. Many sentences begin with the particle onenh (modern ómá ‘now, then, at this time, already’).

(6) Mohawk (David of Schoharie, in Hale 1883: 128.29)

Onenh jatthondek sewarihwisaanonghkwe Kayarenhkowah.
now you listen you all work completed great league
‘Now listen, ye who established the Great League.

Onenh wakarighwakayonne.

now the matter has become old
Now it has became old.’

ómá sometimes appears at the beginning of conjoined clauses as well.

(7) Mohawk (David of Schoharie, in Hale 1883: 126.26)

Endewaghneghdotako skarenhhesekowah,
we will pull up a pine tree it is a large tree
‘We will pull up a pine tree — a lofty tree —
enwadonghwenjadethare eghyendewasenghteh
it will earth pierce  we will log drop
(and) will make a hole through the earth-crust, (and) will drop

tyoghnawatenganghijohnh kathonghdeh thienkahhawe;
there current is swift  where it will carry it away
this thing into a swift current which will carry it

onenh denghnon dentidewagneghdoten
now  afterward we will have stood the pine
out of sight,

onenh denghnon yaghnonwendonh thiyaensayeken
now  afterward never  will they see again

nonkwateresera
our grandchildren
and then never will our grandchildren see it again.’

Although ôm₄ appears between clauses, it serves more as a temporal adverbial than as a coordinate conjunction. It functions the same way in the modern language, appearing at the beginning of clauses indicating the sequentiality or simultaneity of events.

Ôm₄ does appear between nominals in the eighteenth-century manuscript. One passage was translated by Hale as follows: ‘Now, then, thou wert the principal of this Confederacy, Dekanawidah, with the joint principal, his son, Odadshoeghte; and then again his uncle, Wathadodarho; and also again his son, Akahenyonh; and again his uncle, Kanyadariyu; and then again his cousin, Shadekaronyes; and then in later times additions were made to the great edifice’ (Hale 1883: 127 – 129). Note the particles between the nominals in the excerpt in (8).

(8) Mohawk (David of Schoharie, in Hale 1883: 126.28)

onenh nene yeshodonnyh Wathadodarho;
then  the one  his uncle  (name)
‘(and) then again his uncle, Wathadodarho;

onenh nene yeshohowah akahenyonh;
then  the one  his son  (name)
(and) also again his son, Akahenyonh;

onare nene yeshodonnyh Kanyadariyu;
then again  the one  his uncle  (name)
(and) again his uncle, Kanyadariu;

then the one his cousin (name)

(and) then again his cousin, Shadekaronyes;

then the one on top

(and) then in later times

they added framepoles great framework additions were made to the great edifice.'

The role of this particle here is actually to set off individuals in turn, men who succeeded each other in office. As before, the particle is serving as a sequential discourse adverbial but not necessarily as a syntactic conjunction.

Two other particles appear between clauses in the eighteenth-century manuscript. One is ok, sometimes preceded by the definite marker ne.

(9) Mohawk (David of Schoharie, in Michelson et al. 1980: 27.8)

Daghsatkaghthoghsronne ratianarenyon

tahsatkahthohserum? ratyanarunjy

there did you look repeatedly along they track on top severally

'You were seeing here and there the footprints

onkwaghsotsherashonkenha;

ukwashotsherashuk'ha

our be a grandparent many deceased of our ancestors;

neok detkanoron ne shekonh

ne ok tetkanóryu ne shékýu

the only mutually there is dear is the still

(and) people are sorrowful as long as

ayuyenkwaroghthake jiratighrotoaghkwhake.

ayoy¿kwaró:take? tsi rathrot:aghkwake?

should it smoke stand continue where they used to smoke

the smoke continues to rise.'
The other is ōmi⁷, spelled ony. In (10) ony appears at the beginning of each successive clause in a series.

(10) Mohawk (David of Schoharie, in Michelson et al. 1980: 28.13)

Kenyutnyonkwaratonnyon,
kd:ʔa yohnyúwarutúnyu
here it pricker attached severally
‘Here there are prickly bushes,

ne ony kenyotdakarohon,
ne ōmi kkd:ʔa yottakarátwá
the also here it self protrudes
and here also (branches) are sticking out,

ne ony kenkontifaghsoton.
ne ōmi kkd:ʔa ya?tekuctífsahó:tu
the also here over there they skirt stand severally
and there the branches are reaching to the ground.’

In (11) ōmi⁷ precedes successive nominals. The passage begins: ‘Everyday you are surprised at those who were once great.’

(11) Mohawk (David of Schoharie, in Michelson et al. 1980: 33.45)

Onghwenjakonh niyeskahhags;
yhwatsya:kü niyeskáhas
it earth in there away back one has
‘Into the earth they are being taken again;

ken-ony rodihskenrakeghdethaghkwe,
kkd:ʔ ōmi⁷ rotihskaʔrakehtéhakhwe?
here also they carry over the shoulder used to
also those who were warriors,

ken-ony sanheghtyensera, ken-ony saderesera.
kkd:ʔ ōmi⁷ sanhehtyā:sera? kkd:ʔ ōmi⁷ saterē:sera?
here also your woman here also you grandchild have
and also your woman, and also your grandchildren.’

The same two particles, n-ok and ōmi⁷ also appear in sources from the first half of the nineteenth century. An extensive French — Mohawk manuscript dictionary dated 1826 lists only two translations of French ‘et’: nok —, nok ōni (Marcoux ms: 158). Both appear in an 1866 grammatical description of Mohawk by another missionary, Père Jean André
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Cuoq. Under "conjunctions" he lists nok ‘et’, and oni ‘aussi’. His dictionary contains the same particles (1882: 28, 33, 48). (The initial n- of nok is the contracted form of the definite marker ne.)

In 1896—1897, J. N. B. Hewitt of the Smithsonian Institution recorded a Mohawk version of a cosmology legend from Seth Newhouse on the Grand River reserve (Six Nations) in Ontario. This is formal oratory, and Hewitt transcribed it from dictation, so it is not precisely equivalent to spontaneous colloquial speech of the time, but Hewitt knew the Northern Iroquoian languages well and introduced less distortion than many others might have. The text contains both of the particles used by David of Schoharie, Marcoux, and Cuoq.

The particle nok often begins sentences and paragraphs, and is variously translated ‘then’, ‘but’, or ‘and’. (Ok is translated ‘just’ or ‘only’.)

A young woman underwent many trials. At nightfall, she was told to lie on a mat at the foot of a chief, which she did. ‘They did not lie together; they only placed their feet together.’ The sentence in (12) follows as a new paragraph in the text and translation.

(12) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 271)

No’k以人为本 ne’ nefi’ ca’or’h’he’ nefi
But the now it became daylight now
wa’hiatkets’ko?.
they two raised selves
‘And when morning dawned, they two then arose.’

The particle relates a new episode to the previous one semantically, but it does not conjoin clauses syntactically. The two sentences remain completely separate structurally (and intonationally).

The particle ok is still used in modern Mohawk, with the same discourse-adverbial function. If one asks a friend how he or she is feeling, the friend replies, then asks: Ok nizse? ‘And you?’. A modern speaker told a children’s story about three little pigs. One pig spoke French, and said “oui oui”.

(13) Mohawk (Leatrice Beauvais, p. c.)

Ok ne shayâta tyorhâsha? nê: rahrûkha?.
and the one body English it is he speaks
‘And one spoke English.
Râzűty nê’e “oiŋk oįŋk”.
he says it is
He said “oink oink”.

Ok ne ka? nihrə?a ʔukwehwehneha nē: rahrųkha?.

and the just he is small real-people-ish it is he speaks

And the little one spoke Indian.

Rāụty she]? nē?e “kwiz kwizk”.

he says then it is

He said “kwiz kwizk”.

Ok could often be translated ‘et’ or ‘and’, but it actually functions more as a discourse adverbial than as a conjunction; it relates contrasting elements semantically, but it does not specify the internal syntactic structure of sentences. Note the period intonation (low falling tone followed by pause) separating the sentences.

The particle omite? used by David of Schoharie, Marcoux, and Cuoq, also appears in the cosmology legend in contexts where it could be interpreted as either ‘also’ or ‘and’. One passage was translated by Hewitt as follows: ‘And when she had finished shelling the corn, she hulled it, parboiling the corn in the water. And when the corn was parboiled, she then poured the grains into a mortar.’ It continues:

(14) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 271)

neŋ’ ia’eciaca’totā’ko? neŋ’ o’ni wa’et’he’te?.

now she it pestle took now also she it pounded

‘She then got the pestle, and pounded the corn to meal.’

The particle omite? could be interpreted as a link between the two clauses here, like the English ‘and’ of the translation, but in fact it functions more like English ‘also’ or ‘too’, adding the pounding with the other processes involved in preparing the corn: shelling, hulling, parboiling, etc. Omi? still appears in modern Mohawk meaning ‘also, too’. One often hears, for example: ?i: őmi? ‘me too’. The particle functions adverbially as a discourse marker, but not as a syntactic conjunction. In fact, it often cooccurs with tanu(?) ‘and’.

(15) Mohawk (Sonny Edwards, p. c.)

Rụmateryátare? tsi nų: nihunéthahkwe?

they knew to where there they used to go

‘They knew where to go"
tsi rütöratskw? aki:ry runitsyató:ratskw?
so they used to hunt I should say they used to hunt fish
to hunt, I should say to fish,
tanu? okaryo?tatshu?:a ni: ɔmi?.
and all kinds of game really also
and get all kinds of game as well.'

The combination nok o'ni listed by Marcoux also occurs in Hewitt's
cosmology text, often at the beginning of sentences. The sentence in (16)
appears late in a paragraph translated by Hewitt as follows: 'Hence she
was able with fortitude to suffer the burns without flinching, when the
mush spattered on her while she was cooking. If she had flinched when
the drops of hot mush fell on her, he would have said to her: “I do not
believe that it is true that it is thy wish that thou and I should marry”.'
The text continues:

(16) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 274)

No'k' o'ni ne' dji' wa'ōnta'kats'ate' ...'
and also the where she herself nerved to endure it
‘Besides this she bore with fortitude the pain (at the time when
the two dogs licked the mush from her body)

The particles, translated here 'besides', link this statement to an idea
several sentences earlier: 'she was able with fortitude to suffer the burns
without flinching'. The link is semantic but not syntactic.
The modern particle tanu 'and' does not appear as a coordinating
conjunction in the eighteenth and early nineteenth-century manuscripts.
Its ancestor does occur in the eighteenth-century manuscript, however,
in the passage cited above in (7), part of which is repeated here.

(17) Mohawk (David of Schoharie, in Hale 1883: 126.26)

onenh denghnon yaghnonwendo:nh thiyaensayeken
now afterward never they see again
nonkwatesera.
our grandchildren
and then never will our grandchildren see it again.'

The meaning of the particle here corresponds to that of its Oneida cognate
tanu: 'then, next, after that'. The Mohawk particle appears with the
same meaning in Marcoux's 1826 dictionary under 'ensuite'. It is listed
in 1866 by Cuoq, but with a somewhat different meaning: tenhnon, tanon 'mais'. In his 1882 dictionary he gives tennon vel tanon 'et aussi; mais'. (The sequence on represents the vowel [u].)

The particle appears again, spelled tà'hnon', throughout the 1896 cosmology text. Hewitt translated it as 'moreover', 'besides', or 'and'. It often appears near the beginning of independent sentences, relating them to material earlier in the discourse. At one point, a son had just told his mother that he was going to die. Hewitt's free translation runs: "'My breathing will cease; besides that, my flesh will become cold, and then, also the joints of my bones will become stiff. And when I cease breathing thou must close my eyes, using thy hands. At that time thou wilt weep, even as it itself will move thee [that is, thou wilt instinctively weep]. Besides that, the others, severally, who are in the lodge and who have their eyes fixed on me when I die, all these, I say, will be affected in the same manner. Ye will weep and your minds will be grieved.' Notwithstanding this explanation, his mother did not understand anything he had said to her.' The text continues:

(18) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 259)

Neñ' tà'hnno se'ha' i'si' noñ'we dji now besides somewhat farther vonder the place where na'ho'te' wa'shako'hro'ri'.
the kind of thing he it told her
'And now, besides this, he told her still something more.'

The particle links the information semantically to material several sentences earlier, but it does not coordinate it syntactically.

In many passages in the cosmology legend, tà'hnon' does link adjacent clauses. This is presumably the route by which it came to be reinterpreted as a conjunction. Either the meaning 'moreover' or 'and' would fit in a sentence like that in (19).

(19) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 257)

No'k' hā'kare' neñ' ia'akote'niseri'he'se' neñ'
but after a time now her day arrived for her now
'At last the day of her confinement came,
wa'akoks' tā'ne' tā'ne', tà'hnon'
she became possessed of a child and
iakoŋkwe ne' eksa'atce, she a man being (is) the she a child (and) she gave birth to a child, and the child was a girl.'

Within the same text, there is evidence that tā'homon was beginning to appear between elements that were syntactically as well as semantically linked. Note the particle between the conjoined nominals in (20).

(20) Mohawk (Seth Newhouse, 1896, in Hewitt 1903: 267–268)

Wa'itang na'karoŋto'te ne'dji' maple such it tree kind the where
tenieia'hiak'tha',
one uses it to stream cross

‘Maple is the kind of log that is used at the crossing,
no'ke o'ho'sera' tā'hnomono skaroŋtas'tac ne'karoŋto'te' but basswood and ironwood such it tree kind
and the log is supported by clumps of young saplings of basswood
oteroŋtoñi'ač iotho'kotoŋnio tediara'ro'c noŋka'ti it sapling it clump stands both sides of it
and ironwood, respectively, on either side of the stream.’

Syntactic coordination thus appears to have become grammaticized only within the last century in Mohawk. The particles that appear between coordinate constituents in the eighteenth and early nineteenth century, ö'na, nok, and öni, probably functioned then as they do today, as adverbials relating material semantically to the rest of the discourse, but not as coordinate conjunctions specifying the internal syntactic structure of sentences. All appear at the beginning of single dependent sentences as often as they do with conjoined clauses or other constituents. It is perhaps significant that Cuoq noted in his grammar, “Il n’y a pas un grand nombre de conjonctions en Iroquois. Certains adverbes en font quelquefois l’office” (Cuoq 1866: 121).

The ancestor of the modern conjunction tany functioned first as a clause-initial temporal adverbial meaning ‘after that’ or ‘next’. Its Oneida cognate tahnu: still retains this function. In the late nineteenth century, Mohawk tany evolved beyond its temporal sequential meaning to link successive thoughts, much like ‘moreover’ or sometimes ‘but’. It is only within the past century that it has developed its modern grammatical
function as a coordinating conjunction. It now appears systematically between coordinate clauses and major constituents, although it is not fully obligatory. Mohawk *tanuy* links not only successive events but parallel constituents, whose order could be reversed with no change in sense. Its Oneida cognate never appears in such contexts. As might be expected, the grammaticization of this particle as a conjunction has been accompanied by phonological reduction: the *h* and final stress have been lost. Most modern speakers do not use the full form *tahnuy*\(^\circ\), although some older speakers and those from more remote areas do remember hearing it.

### 2.2. Oneida

In modern Oneida, a language spoken principally in Ontario and Wisconsin, a variety of particles function as conjunctions. As in Mohawk, clauses are sometimes linked by the temporal adverbial *óm4* ‘now, then, at this time’, but the particles usually cited by speakers as translations of English ‘and’ are *okhna*\(^\circ\) and *okhale*\(^\circ\).

The particle *okhna*\(^\circ\) links clauses describing sequential events.

(21) Oneida (Melissa Cornelius, in Abbott 1980: 70)

> *Tho niyohtyhttti kwah tsi? nika yahâ:lawe?*
> 
> there how it goes just while of it away did he arrive
> 
> `It goes on this way — he gets there`

> 
> and so away did he dip for water and grits

> *and dips for water and grits.*

*Okhna*\(^\circ\) now functions as a conjunction, but its use in discourse suggests that it may have originated as an adverbial relating events in discourse. It often appears at the beginning of new sentences, meaning ‘next’, ‘then’, or ‘so’. The sentence in (22) was part of a tale in which a fox suggested to a bear that they take along a sleeping horse so they could suck her milk whenever they got hungry. The fox said, “I will splice your tails together and tie them up; I’ll make them good and tight. And I’ll get behind and push.”

(22) Oneida (Isaac J. Webster to Guy Elm, in Lounsbury 1953: 104)
Okhna? kwi: ne’n ohkwali wahathuyt̓áte.

And so then the bear he consented
And so the bear consented.’

A second particle (o)khale? (often without o-) conjoins constituents of all kinds. In (23) it conjoins both clauses and nominals.

(23) Oneida (Melissa Cornelius, in Abbott 1980: 69)

*Nale? tho yahá:lawe? kayh̓uhat̓áti*

the again there away did he arrive it river go along

‘Again he got to a creek


and away did he dip water and grits

*and he dipped for water and grits’

The etymology of this particle is transparent. It is a compound of the particle ok, cognate with Mohawk ok, plus a particle ale?, which in most of the Northern Iroquoian languages, including Oneida, still means ‘again’, as can be seen at the beginning of the sentence (23) above.

Okhale?, like okhna?, appears frequently at the beginning of new sentences, relating new material semantically to the discourse. A young man had prepared for a race. When he arrived at the appointed spot, he looked around, but saw no competitor. The text continues:

(24) Oneida (Melissa Cornelius, in Abbott 1980: 69)


and then down away did he look did he confront

‘Then he looked down and noticed

*kaya?kwá:hele? tho laya?tatáti ...*

it monster there he body go along

a monster there with a long body.’

Although okhna? and okhale? are now well established as conjunctions in Oneida, they are still not obligatory in coordinate structures. Speakers often comment that ‘and’ occurs much more frequently in English than these particles occur in Oneida (Clifford Abbott, p.c.). Sentences consisting of clauses linked by intonation alone are not uncommon, as in (25).

(25) Oneida (Georgina Nicholas, in Michelson 1981: 18.34)
Tayehala:kö: thik₂ ieyushalanyeʔtákhwaʔ?,
she unhung that one scrubs with it
'She took down the washboard
tayutáhsawáʔ waʔtyushalányeʔ?,
she started she scrubbed
(and) started scrubbing the clothes.'

Nominals are sometimes linked by intonation alone as well, although the use of okhalez is slightly preferred (Clifford Abbott, p. c.).

Additional evidence that the grammaticization of syntactic coordination may be relatively recent in Oneida is provided by earlier records of the language. Early documentation of Oneida is limited, but the small amount that exists does not contain the modern Oneida conjunctions. In 1789, Jacob Reed, an Oneida, wrote some letters to his minister, Samuel Kirkland. They contain some coordinate clauses linked only by juxtaposition. The passage in (26), with no Oneida conjunction, was translated by a modern speaker, Richard Chrisjohn, into a compound sentence in English.

(26) Oneida (Jacob Reed, in Campisi - Chrisjohn 1980: 42.13)

oyawesne kati Rage agwegh askennen
oyá: wésne? kati? Lake akwéh ask₄:ná
another person just Father everything all right
'Father, tell the other person you went with, the Governor,
hahetsrighwatonghse ne Governer tokesage
ghetsli:watuhase? ne: to:k₄:skë
you lay out the words for them it is it is true
that everything is all right (and) what I say is true.'

The connective particles that do appear between coordinate structures are the same ones that appeared in the early Mohawk documents: nok and oni.

(27) Oneida (Jacob Reed, in Campisi - Chrisjohn 1980: 41.2)

Waghyonghyadonse skennen thigon thigonke
waʔkuhyattúseʔ? sk₄:n₄ʔ thik₄ thik₄:ke
I wrote to you all right there
'I am writing to you that everything is all right (with me)
Mr. Reed was fluent not only in Oneida, but in English and French as well; he was also literate in both Oneida and English, and perhaps French. By the time he learned to write, the French and English missionary traditions for writing Mohawk were well established. The French had established orthographic conventions that included the use of \( r \) for the liquid which today varies among Mohawk dialects between a retroflex and lateral. Oneida shows only \( [l] \), but the letters contain both \( l \) and \( r \). The French used the digraph \( en \) for Mohawk \([lm]\) and \( on \) for Mohawk \([u]\).

Mr. Reed’s Oneida letters contain the same conventions, with occasional instances of \( eng \) or \( ea \) for \([lm]\), and \( ong \) for \([u]\). These symbols suggest the influence of the Mohawk orthographic tradition, so that is not clear to what extent the letters represent the Oneida oral style of the period. It is interesting, however, that no modern Oneida conjunctions appear in the letter.

A letter written in 1829 by Daniel Bread, an Oneida Chief at Green Bay, to Reverend Eleazer Williams, also lacks the modern conjunctions. Since neither punctuation nor capital letters are used, it is not always clear which clauses were conjoined and which were separate sentences. There is clearly some coordination by juxtaposition alone, however. The particles that do link coordinate clauses and nominals are not the modern \( ok\text{n}\text{a} \) or \( ok\text{hl}\text{e} \), but rather the same ones that appeared in the earlier letter: \( ok \), \( oni \), and the combination \( ok oni \).

The particle \( ok \) most often introduces new sentences in this 1829 document. It appears to relate new statements to previous discussion semantically, but not necessarily syntactically. The sentence in (28) followed a passage describing a discussion with Peter, who said, ‘It’s his fault that the words can’t be straightened out — he’s only after his own pleasure.’

(28) Oneida (Daniel Bread, 1829, in Abbott ms)

\[
\begin{align*}
\text{Ok} & \ \text{hagwa} \ \text{ia} \ \text{honahote} \ \text{tehinaktotani} \\
\text{Ok} & \ \text{akwah} \ \text{yah} \ \text{oh} \ \text{nahote?} \ \text{tehinaktotani}
\end{align*}
\]

\begin{align*}
\text{just} & \ \text{not} \ \text{at} \ \text{all} \ \text{did} \ \text{I} \ \text{take} \ \text{him} \ \text{seriously}
\end{align*}

‘I didn’t take him seriously at all.’

\( Ok \) does appear at the beginning of conjoined clauses in the letter, sometimes meaning ‘and’, sometimes ‘but’.
(29) Oneida (Daniel Bread, 1829, in Abbott ms)

honkiatorenne ne saiatonsra
"Your letter found me"

ok wakatshinnonmitsi sonktokense ne hanatakariasne
I am glad that to find out the in Washington

ok wakatsanu:niz tsi? sukto:kase? ne anatakalyasne
and I am glad to find out how it is going in Washington

tsi honen nitiotyeren ne hongwariwa
that now what goes on the our business

tsi? ona nityotive:la ne ukwali:wa?
with our business.'

The letter also contains a clear compound nominal conjoined with ok. After discussing other matters, Mr. Bread switches to a new topic.

(30) Oneida (Daniel Bread, 1829, in Abbott ms)

Ok oia tsi nihotiatawenhon kogwes ok sawatits
other what happened to them (name) and Baptist

ok oya tsi? nihotiya?taw:u Kokwes ok Sawa:tis

wathonrihotarho

wa?thutlihotalho?

they quarreled

'What happened to the others is that Kokwes and Baptist

quarreled.'

As in Mohawk, the particle oni appears in independent sentences. It also appears at the beginning of conjoined clauses, as in (31).

(31) Oneida (Daniel Bread, 1829, in Abbott ms)

Onen aia thowen garagwen oni heso wahnowentanyon
now a lot removed also a lot they spread rumors

ona yawe?towana kalakwa oni e:so wahynow:shhtanyo?'

'A lot gets taken out of context and a lot of rumors are spread.'

The combination ok oni also occurs, usually at the beginning of new sentences. Describing his visit to Oneida Castle in New York State, Mr.
Bread wrote that things were depressing there, but it was none of his business. Then bringing up a new matter, he wrote:

(32) Oneida (Daniel Bread, 1829, in Abbott ms)

Ok oni ne hatennatshera ia honahote
ok uni? ne atiyna:tsla? yah oh nahohte?
also the provisions nothing

'About the provisions, they have not

thatehotiiatoretoun iatyongwaiatiste ne Green Bay.
thay?tehota?yotehnt" yad?tyukwayatiste? ne
did they pay attention we are left alone the
paid any attention (and) we are left alone at Green Bay.'

This letter, like that written earlier by Mr. Reed, is full of Mohawk spelling conventions. Note the use of r and of the digraphs en for [ʌ] and on for [ʊ]. It is thus not entirely clear to what extent the particles ok and oni reflect Oneida oral style of the time and to what extent they reflect Mohawk literary conventions. Eleazer Williams was an Episcopal minister who had produced hymnals in Mohawk that were used by the Oneidas. Modern Oneida speakers comment that the early letters sound like Mohawk. In any case, the modern Oneida conjunctions okhna? and okhale? are conspicuously absent.

In 1939, a group of Oneida people working with Floyd Lounsbury on an International Phonetic Alphabet project wrote down approximately 800 Oneida texts. The particles okhna? and okhale? appear essentially in their modern forms in these documents, sometimes functioning as coordinating conjunctions between clauses and nominals. It thus appears that the modern Oneida coordinating construction was grammaticized some time between 1829 and 1939.

2.3. Onondaga

In modern Onondaga, a language spoken in central New York State and Ontario, the most common device for coordinating clauses is simple juxtaposition with linked intonation. As an Onondaga man told his grandson how to make a snowsnake, he used the compound command in (33), with intonational but no grammatical marking of the relation between the clauses.
(33) Onondaga (Harry Webster, in Woodbury — Webster 1980a: 135)

tásha thokë ohwáhta? o?ë: na?
you hand over there it maple it stick
‘Hand me that maple stick

will you eyes put on that so will I do will I stick make
(and) keep watching the way I’ll do it, dressing up the stick.’

Nominals are also combined with intonation alone. The sentence in (34) was part of a discussion of an upcoming snowsnake match.

(34) Onondaga (Jessie Pierce, from Wallace Chafe p.c.)

tghatinghæ?seg? tehoti?taækhe kaye:i
they will oppose each other mudhouse four
nihotinskeh.
houses
‘The Mudhouse (and) Four Houses teams will play each other.’

As in Mohawk and Oneida, events are sometimes introduced with the particle on7 ‘then, now, at this time’, but this particle functions more as a temporal adverbial than as a coordinating conjunction.

The particle ohni?, cognate with Mohawk òni? and Oneida oni? ‘also’, also serves as a discourse adverbial in Onondaga. It occurs in independent clauses, relating them to earlier information. During one conversation, a speaker was lamenting the fact that in her community, young people are no longer as strong in their traditional beliefs as they once were. The particle ohni? began successive new sentences.

(35) Onondaga (Jessie Pierce, from Wallace Chafe p.c.)

also no more do we know CONTR also
‘And we don’t know

the how stars mean we know stars
the meaning of the stars anymore.

CONTR too how so it is how sun/moon
We also don’t know the meaning
\[ \text{yanen} \text{sitwaygëei} \text{shå} \text{nixohëhá} \text{ne oñis} \text{ah} \].
we know stars how so it used to be the long ago
of the sun like we used to.

During the same conversation, this speaker had said that when she was small, they used to plant onions, and she would pull a lot of weeds. In the next sentence, the particle oñi? modifies the nominal for ‘beans’.

(36) Onondaga (Jessie Pierce, from Wallace Chafe p.c.)
\[ \text{osahe} \text{tå} \text{óñi} \text{gho} \text{nya} \text{ne} \text{on} \text{hekgáhék} \text{. beans} \text{too} \text{I will pick the when it will be time} \] ‘I’d pick beans, too, when the time came.’

Oñi? appears in coordinate structures as well. In (37) it links clauses.

(37) Onondaga (Jessie Pierce, from Wallace Chafe p.c.)
\[ \text{aka} \text{sha}s \text{shåniké} \text{nitwaxkenoh} \text{. as I remember so much as I have lived} \] ‘As far back as I remember
\[ \text{tyotkó} \text{tekneinho} \text{kwáhkwáhék} \text{. always I was picking up potatoes} \text{I was always gathering potatoes} \]
\[ \text{gwakn} \text{gnó hko} \text{sti} \text{on} \text{on} \text{gyakwayéthwahq} \text{. I will throw potatoes too the when we will plant things and planting potatoes when we were doing our planting.’} \]

Oñi? can also link nominals. The sentence in (38) was part of a discussion of Longhouse ceremonies. Note that the coordinate nominals are the same ones that were linked with intonation alone in (34) above.

(38) Onondaga (Josephine Hill, from Wallace Chafe p.c.)
\[ \text{na} \text{óheké ha} \text{tëshqo tyésta} \text{. CONTR now they will all mix themselves again} \] ‘Then the Four Houses and the Mudhouses
\[ \text{ne kayeih hotinoskéh tehoti} \text{taékéh oñi} \text{. the four houses mudhouse also will all come together again.’} \]
Although ohni? is not obligatory with coordinate constituents, sentences like (38) indicate that its function has moved beyond that of English 'also' or Mohawk ö:ni?. The second nominal 'mudhouses' was not added to the sentence as a second thought.

Historical documents suggest that ohni? has not always functioned as a syntactic conjunction in Onondaga. An anonymous French manuscript dictionary from the late seventeenth century, published by Shea in 1860, makes no mention of the particle at all, although the dictionary is copious, containing 3,500—4,000 entries. French 'et' is translated 8ng8a [ogwa]. French 'aussi' is translated with the same particle.

From 1744 to 1784, David Zeisberger, a Moravian missionary, worked among the Onondaga. He produced both a grammar and dictionary of the language. In his grammar (published 1888) under the title "conjunctions", he lists the same particle given in the seventeenth-century manuscript: unqwa 'and, too'. In his dictionary (published 1887) under 'and', he lists unqua and óchni. Under 'also', he lists unqua, ochni, and ohne.

In 1889, J. N. B. Hewitt recorded an Onondaga version of the Iroquoian cosmology from John Buck on the Grand River reserve in Ontario. In this text, clauses are most often coordinated by juxtaposition alone.

(39) Onondaga (John Buck, 1889, in Hewitt 1903: 193.8—9)

\[\text{Wa’wa’den’dia’ wa’gana’djiod’gwa’ ne’ odjisda’ge}\]

‘She went forward, (and), taking off the pot from the fire, putting ashes into the hot water.'

Other kinds of constituents are also linked by juxtaposition alone. Note the coordinate locatives in (40).

(40) Onondaga (John Buck, 1889, in Hewitt 1903: 194.7—9)

\[\text{Ono’nda’hädie’, ge”chwadęntó’?}\]

‘There was a mountain range, visible river courses, (and) put ashes into the hot water.'
a high clay bank, near which he passed.'

The particle ohni' does appear in this text, most often between coordinate nominals.

(41) Onondaga (John Buck, 1889, in Hewitt 1903: 183.1)

\[\text{Wa'o'he'ha', wa'oñtgat'hwa? ne'\text{tho ge}ñda'gâ?' it became day she it saw there it lay}\]
\[\text{The next day came, (and) she looked (and) saw lying there}\]
\[\text{ne' skeñoño'do' odjis'da' o'ni' ne'\text{tho} c the deer it fire also there}\]
\[\text{ne' skefino' do' odjis'da' o'ni' ne'\text{tho} c the deer it fire also there}\]
\[\text{gago'hetchäge'he'ni', oie'\text{da'} o'ni' o'sotcio'\text{da'} it brands lay heaped it fuel also it heap stands}\]
\[\text{firebrands, (and) also a heap of wood,}\]
\[\text{ne'\text{tho} c ge'\text{hā}. there one it has brought}\]
\[\text{all of which had been brought thither.'}\]

At the time the cosmology text was dictated, ohni' was already beginning to function more as a conjunction than as simply 'also'. It is clear from the verb in (42), which contains a dual agent pronoun, that the second nominal 'Flint' could not possibly be an added thought.

(42) Onondaga (John Buck, 1889, in Hewitt 1903: 196.8)

\[\text{Tho'ge' o'ne' c wa'hiiatdo'ga' at that now they two noticed}\]
\[\text{At that time they,}\]
\[\text{ne' ho'soda'ha' ne' O'ha'ā' o'ni' the his grandmother the it Flint also}\]
\[\text{his grandmother and Flint,}\]
\[\text{ne' tca' sāioñnatga'de'ha' ne' the where again they became numerous the}\]
\[\text{also noticed that the animals again}\]
\[\text{ho'soda'ha'. they are animal}\]
\[\text{became numerous.'}\]
On occasion, clauses are also conjoined with *ohni?*.

(43) Onondaga (John Buck, 1889, in Hewitt 1903: 151.6)

\[
\text{Tho}'ge' o'ne"c de"siia'chia'k},
\]

at that (time) now thou stream wilt cross

\[e"sadoñgo'da' o'ni'\].

thou wilt pass on also

‘Then thou wilt cross the river, and also pass on.’

The grammaticization of coordinate conjunction had thus begun by the end of the nineteenth century. The particle *ohni?*, originally ‘also’, has been extended beyond its additive meaning to link parallel, unordered constituents. Several facts suggest that the modern structure may not be very old, however. A seventeenth-century dictionary shows a completely different particle, *pkwah*, as the equivalent of ‘also, and’, and the same particle appears in a late eighteenth century dictionary. In modern Onondaga, clauses are still most often conjoined by simple juxtaposition with appropriate intonation, although the particle *ohni?* sometimes follows the second clause. *Ohni?* does occur somewhat more often with coordinate nominals, but it is by no means obligatory there either.

2.4. Cayuga

Modern Cayuga, now spoken primarily on the Grand River in Ontario, contains a general coordinating conjunction *hni?* that follows the final coordinate constituent. A man described his friend’s wife with the coordinate clauses in (44).

(44) Cayuga (Reginald Henry, p. c.)

\[Ekso'kó:wah, kokhwayetês'\] *hni? ne?*.

she is pretty she knows how to cook *and* it is 

‘She’s pretty, *and* she knows how to cook, too.’

*Hni?* also appears systematically after coordinate nominals. Asked what the family would plant in their garden this year, a speaker replied:

(45) Cayuga (Reginald Henry, p. c.)

\[A\text{yë:} akwê: onghë? osahe$tå'? ohn$atå?q hni?\]

seems we think corn bean potato guess *too* 

‘I guess we think corn, beans, and potatoes.’
As in most of the other languages, the conjunction does not appear in every coordinate structure. Coordinate clauses are often linked by intonation alone. The compound sentence below was part of a Cayuga telephone conversation.

\[(46)\] Cayuga (Reginald Henry, p. c.)
\[
\text{etshté? } \text{kiʔ kyęʔ? waʔtsi } \text{ętšá wihtahk.}
\]
you will come just later you will bring it along
‘Come on over after awhile (and) bring it along’

The source of Cayuga *hniʔ* is transparent: it is cognate with the Mohawk, Oneida, and Onondaga particles meaning ‘also’. It still has this meaning in Cayuga as well. After admiring a dog, a visitor asked his host whether he had any other pets. The reply was:

\[(47)\] Cayuga (Reginald Henry, p. c.)
\[
\text{ęhęʔ. Takuus kiʔ } \text{hniʔ } \text{akhnáhskwaʔ.}
\]
yes cat just too I pet have
‘Yes. I have a cat, too.’

*Hniʔ* indicates the relevance of this answer to the question here, but it does not conjoin the noun or clause to it syntactically.

It is clear, however, that the function of *hniʔ* in Cayuga has expanded beyond its original status as an adverbial. It now appears in contexts where it cannot be simply interpreted as ‘also’. One man asked another the names of his daughters as they watched them play.

\[(48)\] Cayuga (James Skye, p. c.)
\[
\text{Laurie, Susie, } \text{Cecelia hniʔ.}
\]
‘Laurie, Susie, and Cecelia.’

Little early textual documentation exists of Cayuga, but in 1912 Mary Sky Gibson, a Cayuga speaker, dictated an account of the life of her husband John to Alexander Goldenweiser. The particle *hniʔ* was already used as a grammatical conjunction in this document, but it was not obligatory, either between clauses or conjoined nominals. The second nominal in the sentence below could not have been an after-thought, since the preceding verb already contained a plural pronoun.
Cayuga (Mary Sky Gibson, 1912, in Goldenweiser ms: 2)

\[
\text{thô} \ \text{gkai}?'\text{tró}:'\text{tak} \ \text{khńo}:\text{ha}? \ \text{ha}?\text{nǐ} \ \text{hni}?.
\]

there they will live my mother my father too

'That is where my mother and father would live.'

A short time later in the text, the same compound nominal appears with no overt conjunction.

Cayuga (Mary Sky Gibson, in Goldenweiser ms: 11)

\[
\text{thô} \ \text{ki} \ \text{ne} \ \text{khńo}:\text{ha} \ \text{ha}?\text{nǐ}? \ \text{gṭkayatō}:\text{wi}?\text{t}.
\]

there these the my mother my father they will decide

'At that time my mother (and) my father would decide.'

Syntactic coordination is now well established in Cayuga, but both modern usage and historical records suggest that this development may be relatively recent. The overt marking of coordination is still optional in the language, especially between clauses, and the diachronic source of the conjunction is still transparent in the particle meaning 'also', which retains its original meaning in the language. Furthermore, the textual material we do have from 1912 indicates that overt marking of coordination of nominals has become more systematic in just this past century.

2.5. Seneca

Modern Seneca, now spoken primarily in western New York State, also contains a grammaticized coordinating conjunction, but it is unrelated to any of those discussed so far. The particle \(kho\) follows the last of a series of coordinate constituents of any kind. In (51) it follows the second of two coordinate clauses.

Seneca (Mithun — Peterson 1980: 114)

\[
\text{I}:? \ \text{gṭkhe}:\text{ke}'? \ \text{gṭkhe} \text{yawi}? \ \text{kho}.
\]

I I will find her I will bring her too

'I will find her and bring her here.'

In (52) \(kho\) follows the last of three coordinate nominals.

Seneca (Myrtle Peterson, p. c.)

\[
\text{aṭkwá}? \ \text{owisá}:\text{ṭhá}? \ \text{owγe}':\text{ṣho}'?\text{o}? \ \text{kho} \ \text{γhsni}:\text{mo}:\text{mo}?.
\]

bread butter sweets too you will buy

'Buy bread, butter, and sweets.'
Several facts suggest that the grammaticization of this conjunction may be relatively recent. It is still by no means obligatory, especially with coordinate clauses. The sentence in (53), for example, part of a legend, contains intonationally linked clauses but no overt conjunction.

(53) Seneca (Myrtle Peterson, p.c.)

tawatkesko? nē o?nya?
it raised up the finger
‘The finger rose up

o?wahtsatę? kwaítakę:
it pointed in the tree
(and) pointed into the tree.’

The source of the conjunction is still present in modern Seneca. It still functions as an adverbial meaning ‘too’, or ‘also’. A speaker began an anecdote about a train ride saying that long ago, when trains first became common, they used to haul everything. He continued:

(54) Seneca (Chafe - Jones 1980: 143)

Ne: ke: nae' kho nae: naximyę?oh.
this again and CONTRASTIVE Whitemen
‘And this again was from the Whitemen.’

*Kho* does not signal syntactic coordination with any other constituent here, but simply a semantic link to an idea outside of the text.

Seneca is the only modern Iroquoian language with the particle *kho*, but a probable cognate can be found among the more distantly related Siouan languages. The Siouan languages display a diversity in their coordinating conjunctions similar to that among the Iroquoian languages. Lakhota and (Santee) Dakota, mutually intelligible dialects, contain several conjunctions with such meanings as ‘and then’, ‘and so’, etc. Their most basic conjunction is not even cognate between the two dialects: compare Lakhota *na* with Dakota *k’aa* ‘and’. They do share a particle *kʰa* however, which means ‘too’ or ‘also’.

(55) Lakhota (Stanley Redbird, p.c.)

kʰo aʔúwo
too bring IMPERATIVE
‘Bring it along (too)!’
There may be another cognate among the distantly related Caddoan languages. These languages exhibit the same diversity among their conjunctions as the Iroquoian and Siouan languages. In Caddo, coordination is most often accomplished by a discourse particle *t'ana*? meaning 'and also, too, another, again'. Another particle, *kuh*, appears more rarely, usually between lexicalized combinations of conjoined nominals. (Caddo *u* corresponds to Iroquoian *o*.)

If this form is indeed cognate, it represents a convergent development with Seneca *khoː*, the grammaticization of a coordinating conjunction from an adverbial meaning ‘too’. The other Caddo conjunction, as well as the unrelated Onondaga and Cayuga conjunctions, confirm that such a development is not uncommon.

The Seneca conjunction *kho* is well established in the modern language. The particle itself is quite old, but its grammaticization as a syntactic marker may be relatively recent. Its source is still transparent: it still functions in the language as an adverbial meaning ‘also’. It appears systematically with coordinate nominals, but it is not at all obligatory with coordinate clauses.

### 2.6. Huron-Wyandot

Wyandot was spoken until the middle of this century in Oklahoma. Although no speakers of Wyandot remain, a body of forty texts recorded early in the century provides documentation of Wyandot narrative. The most common device for conjoining clauses or other major constituents in these texts is juxtaposition alone.

(58) Wyandot (Catherine Johnson, in Barbeau 1960: 107)
Coordinating conjunction

Coordinating conjunction

ahayú du'skenóta ahaécra
he kills the deer he it skins
‘He kills (and) skins the deer’

Wyandot (Catherine Johnson, in Barbeau 1960: 178)

nè ² harayó ce ² harayú di yaá²tayé ²tsí
now he them slay he killed the her body is old
‘At this time he killed the old woman

³acg ³k imèn ³ o ³ deyayomèga.
three of them the her daughter
(and) three of her daughters.’

On occasion, the particle nè ‘now, at this time’ appears before the second of two clauses, but as in the other languages, it does not function exactly as a coordinate conjunction. It frequently begins new paragraphs. The passage below began: ‘While the cannibal was out,

Wyandot (Catherine Johnson, in Barbeau 1960: 78.1–14)

nè ²waitè ²st
now they pound corn
they pounded corn

nè ²awatidá²taró ²tonó
now they bread make several
and made loaves of bread.

nè ²tató²craye ²a²yarè ²du²dá²tara
now basket into she (it) puts the bread
Then the old woman the bread in a basket

nè ²uñè ²utí ²dad ² dekwayuwá nè ²
now she her combs the one the she is large
and combed her eldest daughter’s hair.’

Two other particles occur on occasion with coordinate constituents in the texts. One tale opens with coordinate nominals.

Wyandot (Star Young, in Barbeau 1960: 112.11–16)

ahati'já²ka ahatijátra²ke
they went out hunting they (with them) went
‘A crowd of people started off for a hunt.'
"de hudú'mé' tů'di' "de yàwi'nó' ejateyé'áha.
the his mother also the she is pretty his sister
Among them were a young man, his mother, and his sister.'

The particle tů'di' 'also', sometimes spelled tů"di', appears to be a compound of the particle tu 'there, that' plus the expected Wyandot reflex "di' of the Northern Iroquoian *ohni? 'also'. Its use as a discourse adverbial, linking ideas semantically to previous ideas is clear. One legend describes twin brothers, one good, one bad. The good twin created everything on earth, all living beings and also the people. His brother then came forward and said,

(62) Wyandot (Catherine Johnson, in Barbeau 1960: 62.20—24)
tudi' nê' ndi' eka'tó'ga' dayomé' there too now I I body make the they people
"I too will make some people."

A second particle, nêca?, a combination of ng 'now' plus some particle ša?, appears on a few occasions, linking clauses or nominals.

(63) Wyandot (Catherine Johnson, in Barbeau 1960: 65.18-31)
tů' iyé'tro' de hudú"mé' de rôme' e'ti' there she sits the his mother the he person is young
'As he found his mother
nêca' diwi'nó' hó"te'ýé'áha' and there two they are young women they siblings are
and three [sic] sisters there
tů"di atiyé'ro' tu de' ca' ahaá'kó' also they sat there in he her brought
together, he brought the young woman in.'

The Wyandot are descendants of a group of Huron plus remnants of neighboring nations all defeated by the Iroquois in Ontario in 1649. The Huron language is no longer spoken, although French missionaries living among the Huron during the seventeenth and eighteenth centuries left good lexical and grammatical documentation of their language. Texts from that period consist primarily of missionary translations of liturgical materials, however, so it is difficult to determine the exact usage of particles by native speakers of the time. Still, even the translations contain some coordination by juxtaposition alone.
A variety of particles also occur with coordinate constituents in the Huron translations, among them *din(de)*, translated ‘et, ou, que si’; *ichien*, translated ‘qui, et, aussi’; *chia*, translated ‘et’; and *itondi*, translated ‘aussi’. These last two are presumably the ancestors of Wyandot *ca?* ([§a?] and *tû”di?*. Both can be seen in a prayer which closes as follows: ‘Jesus our Lord of God the Son, for this thou wilt exhort thy Father, for he does not refuse thee anything.’

(64) Huron (Le Jeune, 1636, in Thwaites: 10.72—73)

*chiawesahari Jeanes ond8e de chikhonc8an,*
*aussi vous Marie de Jesus le Mère qui estes Vierge,*
‘And you also Mary, of Jesus the Mother who art Virgin,*

*ondayee itondi chihon. to haya8an.*
*cela aussi dis ainsi soit-il*

that also say. So be it.’

Both particles apparently functioned primarily as adverbials.

Overall, the use of overtly marked coordination is rare in the Wyandot texts. Most often, coordinate structures are associated by juxtaposition alone. Temporal simultaneity or sequence is sometimes indicated by *ne* ‘now’. Other particles that occur between coordinate constituents do not seem firmly established in the grammar as conjunctions. They are not obligatory, and in fact are rare. They retain their additive meanings ‘also’, ‘too’, and usually function as discourse adverbials rather than as markers of sentence-internal syntactic structure, probably much as they did in the seventeenth century.

### 2.7. Tuscarora

Tuscarora, now spoken in western New York State and in Ontario, contains a well grammaticized conjunction *tisng?* that appears in all genres of connected speech. It functions essentially like English ‘and’. It connects both clauses and constituents of all kinds, usually appearing before the final conjunct, but optionally between all. Note its use between clauses in the speech below. During the preaching of the new doctrine of the prophet Handsome Lake, listeners are admonished to abstain from intoxicating drink, because:
The same speaker opened a tale by recounting what he had read in the Bible. Note the use of the conjunction between coordinate nominals.

Like those in the other languages, the Tuscarora conjunction is not obligatory between all linked clauses. The clauses in (67) were linked intonationally, but not joined overtly by a conjunction.

Although *tisn*? is now well established as a conjunction, its modern shape may be recent. The earliest textual material we have in Tuscarora
was recorded in the late nineteenth and early twentieth century by J. N. B. Hewitt, who transcribed the Mohawk, Onondaga, and Seneca cosmology texts cited earlier. Hewitt, whose mother was Tuscarora, was born in 1858 near the Tuscarora community in New York State. His first language was English, but he learned Tuscarora as a young teenager. Although the conjunction appears as systematically in the texts collected by Hewitt as it does in modern Tuscarora, it was recorded with a slightly different form: \textit{ti'-sen'?}. Unfortunately, it is not possible to know what kind of variation there may have been at the time in form or usage, since Hewitt generally regularized his transcriptions. The difference in form is intriguing, however.

The earlier Tuscarora conjunction, probably \textit{tiisq}?\textsuperscript{7}, appears to have developed from a compound. Tuscarora \textit{i} is the reflex of Proto-Northern-Iroquoian \textit{*n} before oral vowels, so the first member of the compound would correspond to the Proto-Northern-Iroquoian sequence \textit{*ni}. This syllable could be cognate with Huron \textit{"di}? and ultimately related to the Five Nations \textit{*ohni}? 'also'. The second syllable appears to correspond to Oneida particle \textit{sá}: 'too' and perhaps Huron \textit{ichien} 'aussi, donc'. With grammaticization, the modern Tuscarora conjunction has undergone phonological reduction so that it no longer bears stress.

\textbf{2.8. Cherokee}

The sole surviving member of the Southern branch of the Iroquoian family is Cherokee, now spoken primarily in Oklahoma and North Carolina. Modern Oklahoma Cherokee contains two basic coordinating conjunctions, a particle \textit{q?le} and an enclitic -\textit{hno}. Both can link clauses or major constituents of any kind. The particle \textit{q?le} appears between coordinate constituents, while the enclitic follows the first word of the second constituent. (Vowels are automatically nasalized phrase-finally.) (68) and (69) contain coordinate clauses.

(68) Cherokee (Pulte 1975: 354–355)
\begin{verbatim}
% U2DO2HI?YU4HNV5 WU2YO3HLE4 Q?LE U\textsuperscript{N2GO2HE3 GA2NV3GV4.
sure enough and he shot it and they saw it falling
\end{verbatim}

\begin{verbatim}
'And sure enough he shot it and they saw it fall to the ground.'
\end{verbatim}

(69) Cherokee (Pulte 1975: 354)
\begin{verbatim}
% U4NA3NE2HTU25SE DO3JER2WA3P2HLV3 DI3DFA,
they raced bushes toward
\end{verbatim}

\begin{verbatim}
'They raced toward the bushes'
When they got closer they saw a horse (lying there).

(70) and (71) contain coordinate nominals.

(70) Cherokee (Pulte 1975: 343)

$q^2s^g^2ya$ $a^2l^e$ $a^2g^3h^y^a$ $a^3n^3w^3n^3h^a$.

man and woman are speaking

'A man and a woman are speaking.'

(71) Cherokee (Pulte 1975: 343)

$q^2s^g^2ya$ $a^2g^3h^y^a$ $n^3h^o$ $a^3n^3w^3n^3h^a$.

man woman and are speaking

'A man and a woman are speaking.'

According to Pulte (1975: 343), $q^2l^e$ "is used in relatively formal speech styles in Cherokee and in written style. ... In most spoken styles, $q^2l^e$ is not used." The enclitic appears instead. (Another particle, $n^3l^o$, also functions as a conjunction. It is a compound of a particle $n^3r^3$ 'then' [perhaps cognate with Proto-Northern-Iroquoian *$^3d^o$] and $q^2l^e$.)

A special kind of historical documentation exists of Cherokee: manuscripts written in the Cherokee syllabary by Cherokee speakers themselves. For the most part, these Cherokee writers spoke no English. Some North Carolina manuscripts from the mid-nineteenth century show slight variation in the use of conjunctions.

In 1859, the clerk I:noli opened an accusation of theft with the sentence in (72). The three verbs 'where she did walk', 'she did come to me', and 'she did say' are juxtaposed with no overt conjunction.

(72) Cherokee (I:noli, 1859, in Kilpatrick - Kilpatrick 1966: 67)

$h^i?a^3h^o$: $w^i$n$^i$ $a^3h^i$ $t^s^d^o$:hv$^i$gi

this, and Wini here where she did walk

$^a$g$^i$l$^i$? $t^s^h^e$:lv$^i$gi

she did come to me

'When Wini was here, she came to me

$n^i$g$^w^v$:sv$^v$gi $e^m^i$ $a^g^i$n$^o$:sv$^v$gi $a^d^e$:lv $u^d^v$:hv$^v$:gi

she did say E:ni she stole from me money she did state (and) said: “E:ni stole, money from me,” she stated.'
The sentence in (73) contains juxtaposed coordinate nominals.


*a:nh* ghwawziyi dudoro:vi digorwe:wisi:sgi argwo:hlv

*here Qualla-place named it clerk, I I was sitting

‘Tsani (and) Tse:si came to me at Qualla,*

unii?tsv:sgi na:sgi tsa:ni tse:si

*they did come that Tsani Tse:si

where I am the clerk.’

In general, however, both *a*zle and *-hno* were used systematically in the documents. Note the use of *a*zle between clauses in (74).

(74) Cherokee (Sdhi:wi, in Kilpatrick — Kilpatrick 1966: 21)

na:gwo ino:li wiganv:di gesë:sdì

*now Ino:li over here to send it (flex) one it will be

‘Now, Ino:li, it will be sent over there to Fishinghawk Place,*


*and fishinghawk-place when you come that to read, you

and when you come, you will read it.’

The conjunction appears between coordinate nominals in (73).

(75) Cherokee (Sdhirwi, 1853, in Kilpatrick — Kilpatrick 1966: 20)

hi?qzgsi tsa:li udho:hl(a)sv ale

*this, in particular Tsa:li he borrowed and

‘Upon what Tsa:li borrowed and upon

gwwayohus:zìv uniz:sdhv unizhne?gwot:tsv

been lost by him, they many they increased

what he lost the interest he is to pay has greatly increased.’

In 1854, Ino:li wrote a letter that contained both coordinate nominals and coordinate verbs, each compound conjoined by the enclitic.


sdhirwi dilasges:sgi dighuyi:sgi hno: na:sgi

*‘Sdhirwi, Dilasges:sgi, and Dighuyi:sgi,*
The two coordinating conjunctions of modern Cherokee were thus used systematically as early as the mid-nineteenth century by Cherokee writers. Their etymologies may be retrievable. \( a^2le \), now translated variously ‘and’, ‘or’, and ‘almost’ matches the Northern Iroquoian particle \( *a\dot{r}e \) ‘again’ in form. This is the same particle that was exploited in Oneida for the coordinating conjunction \( ok\text{-}ale? > okhale? \) ‘and’. The source of the Cherokee enclitic -\( h\text{n}o \) is not clear, but its heavy use at the beginning of new sentences in the modern language, as in (66) above, suggests that it may have originated as a discourse connector, like its equivalents among the Northern Iroquoian languages.

3. Unraveling the mystery

Although the modern Iroquoian languages share nearly all of their grammar, they differ strikingly in one of the most basic of all syntactic constructions: coordination. The conjunctions themselves differ in form: Mohawk \( tan\mu \), Oneida \( okhale? \), Onondaga \( ohni? \), Cayuga \( hni? \), Seneca \( k\text{ho} \), Tuscarora \( tis\text{nj}? \), and Cherokee \( a^2le \) or -\( h\text{n}o \). The constructions also differ in structure: in some of the languages the conjunction precedes the final constituent, while in others it follows. Finally, the coordinating constructions are grammaticized to different degrees in different languages. In some, they are solidly grammaticized: coordinate structures are systematically conjoined by a conjunction that serves only that purpose. In others, overt marking of coordination is rarer and the markers retain their functions as adverbials, relating ideas semantically rather than conjoining constituents syntactically. This surprising situation is the result of both language-internal and language-external factors.

No basic coordinating construction can be reconstructed for Proto-Iroquoian. Coordinate constituents were probably linked primarily by means of juxtaposition with appropriate intonation, a possibility that remains in all of the modern languages. Presumably various adverbials with such meanings as ‘then’, ‘so’, ‘next’, ‘moreover’, ‘besides’, ‘also’, ‘too’, etc. could modify conjoined clauses and phrases, as they do today,
but they were optional. The modern languages do not exhibit cognate conjunctions because there was no grammaticized conjunction in the parent language for them to inherit jointly.

The lack of a grammaticized conjunction in Proto-Iroquoian may be related to language-external conditions of use. An examination of coordination cross-linguistically indicates that the absence of conjunctions is not unusual, particularly among languages without a literary tradition (Mithun 1989). Spoken language has the benefit of intonation to indicate links among elements, a resource only weakly reflected by punctuation in written language. Speakers must produce speech in a steady stream, without an indefinite amount of time to plan intricate syntactic constructions, while writers have the luxury of time to construct elaborate syntactic structures (Chafe 1985). For this reason, overt identification of relationships among clauses and constituents can be more important to readers making their way through elaborate prose than to listeners decoding spontaneous speech.

Coordinate structures of different kinds, furthermore, do not appear with equal frequency in spoken language. Coordinate clauses occur frequently, but coordinate nominals are surprisingly rare in spontaneous speech. This may have an effect on the motivation for grammaticizing overt coordinate conjunction. Coordinate clauses are often used to express consecutive events. Their relationship is easily expressed by juxtaposition in the order of occurrence, accompanied by appropriate intonation and occasional temporal adverbials like 'then' or 'at the same time'. By contrast, speakers seldom introduce multiple new referents into a discourse simultaneously. New entities are typically introduced one at a time, in separate intonation units or clauses, then subsequently identified by pronouns, demonstratives, or, in Iroquoian, by incorporated nouns. Coordinate nominals are used on occasion to identify conceptual units like ‘bow and arrow’, but such phrases are surprisingly rare. Series of nominals sometimes appear in lists, often separated by pauses (‘They saw fish, deer, everything they needed to survive’), but juxtaposition, perhaps accompanied by an adverbial such as ‘also’, can be sufficient to identify such a set. Overall, compound noun phrases do not occur sufficiently frequently in spontaneous spoken language, especially in Iroquoian, to provide very strong motivation for the grammaticization of a special construction.

Yet most of the modern Iroquoian languages have grammaticized conjunctions. Adverbs that until recently served to relate new information semantically to the rest of the discourse have evolved into conjunctions
that specify the internal syntactic structure of sentences. The sequential ('then') or additive ('moreover, also') features of their meaning have receded so that the particles can now link inherently unordered, parallel entities. Since these developments represent separate innovations in each language, the forms do not necessarily match across the family.

The grammaticization of these conjunctions seems to have been prompted by a combination of external and internal factors. It apparently occurred around the same time in most of the languages, the late nineteenth or early twentieth century. This was a period when bilingualism in French or English was becoming generalized. Among the modern languages cited in earlier sections, Wyandot exhibits the least formal marking of coordination. The Wyandot texts were recorded in 1911–12 from speakers born between 1838 and 1859, two of whom spoke little or no English. In all of the other languages, the external influence of bilingualism appears to have triggered the development of conjunctions, although of course it was not necessary that every speaker be bilingual in order for the construction to enter the languages.

At the same time, the internal structure of each language played a role in facilitating the borrowing. The absence of a grammaticized conjunction provided a niche in each for the newly interpreted markers to fill. Internal factors played a further role in shaping the new coordinating constructions. The usual position of the particular adverbial exploited in each language for a conjunction affected the configuration of the new structure. In Mohawk, for example, an adverbial meaning 'then' was selected, a particle that had formerly appeared near the beginning of clauses. The new Mohawk conjunction now appears in the same position, at the beginning of the final coordinate constituent. In Cayuga, an adverbial meaning 'too' was selected, a particle that generally follows the constituent it modifies in that language. The new Cayuga conjunction now appears in a similar position, following the final constituent in coordinate structures.

External factors have further affected the extent to which the new constructions have become established within the languages. Speakers' attitudes toward their European neighbors have made a discernible difference. Coordination by intonation alone is still especially prevalent in Onondaga, and the conservatism of the Onondaga with respect to outside influence is well known. Conjunctions are noticeably more frequent in Mohawk, especially that spoken at Caughnawaga. These people have a long history of functioning enthusiastically and successfully in both their own culture and that of their non-Indian neighbors.
The strikingly different patterns of syntactic coordination in the modern Iroquoian languages are thus the result of a complex set of interacting factors, both internal and external. Internally, each contained an available niche for such a structure, since none originally contained coordinating constructions. This may have been due in part to the external circumstance that none had a strong literary tradition. The sudden grammaticization of coordination appears to have been triggered by another external factor: language contact. The shape of the new construction in each language depended on an internal factor: the particular particle exploited as the source of the new marker. Finally, the external factor of social attitudes continues to affect the degree to which the construction has been solidified.

Notes

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2. The earliest documented systematic use of conjunctions in Mohawk, Onondaga, Seneca, and Tuscarora, is in the texts recorded by J. N. B. Hewitt. It is possible that these documents represent the very beginning of the grammaticization of the construction. Because all material had to be dictated slowly enough to be written by hand, phrase-by-phrase, speakers may well have used more linking particles than they did in normal speech. We also know that Hewitt, whose first language was English, who knew Latin and Greek, and who valued formal literary style highly, spent considerable time polishing the texts after they were transcribed. He may have systematized the use of conjunctions somewhat in the process.

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