0. Introduction
1. Neighboring nations
2. The method of subgrouping
3. Evidence from lexical innovations
  3.1. Tuscarora-Nottoway
3.2. Huron
3.3. The Five Nations languages
  3.3.1. The Western languages
  3.3.2. Onondaga
  3.3.3. The Eastern languages
3.4. Conclusions from lexical evidence
4. Evidence from phonological innovations
  4.1. Tuscarora-Nottoway
4.2. Huron
4.3. The Western languages
  4.3.1. Seneca
  4.3.2. Cayuga
4.4. Onondaga
4.5. The Eastern languages
  4.5.1. Oneida
  4.5.2. Mohawk
5. Conclusions
6. Appendix (vocabularies)

0. In 1608, Captain John Smith encountered a "gigantic" people from the Susquehanna River, several days journey from the head of Chesapeake Bay. He described them as follows:

But to proceed, 60 of those Susquesahanocks came to vs with skins, Bowes, Arrows, Targets, Beads, Swords, and Tobacco pipes for presents. Such great and well proportioned men are seldom scene, for they seemed like Giants to the English, yea and to the neighbours, yet seemed of an honest and simple disposition, [and they were] with much adoe restrained from adoring vs as Gods. Those are the strangest people of all those Countries, both in language and attire; for their language it may well beseeme their proportions, sounding from them, as a voyce in a vault. Their attire is the skinnes of Beares, and Woolues, some haue Cassacks made of Beares heads and skinnes, that a mans head goes through the skinnes neck, and the eares of the Beare fastened to his shoulders, the nose and teeth hanging downe his breast, another Beares face split behind him, and at the end of the nose hung a Pawe, the halfe sleeves comming to the elbows were the neckes of Beares, and the armes through the mouth; with paws hanging at their noses. One had the head of a Woolfe hanging in a chaine for a lewell, his Tobacco pipe three quarters of a yard long, prettily carucd with a Bird, a Deere, or some such devise at the great end, sufficient to beat out ones braines: with Bowes, Arrows, and clubs, suitable to their greatnesse. (Smith 1910.)

These Susquehannock were to develop extensive trade with the English colonists in Virginia and Maryland, and the Swedes and Dutch to the east and north, who knew them by their Delaware name as "Minquas." French Jesuits, living among the Huron to the northwest, referred to them by their Huron name, "Andastes" (Andastoerrhonons) and recognized them

2 The term “Minqua,” which became “Mingo” to the English, was often used more generally to refer to all Iroquois.

3 The Iroquoian suffix -hrong: can be translated ‘people’.

I am especially grateful to the following people, who read an earlier draft of this paper and provided useful comments: Hanni Woodbury, William Fenton, Floyd Lounsbury, Wallace Chafe, Elisabeth Tooker, Lyle Campbell, Michael Foster, Clifford Buell, and Nancy Buell.
primarily as Huron allies against the Five Nations Iroquois (Thwaites 1896-1901). The postcontact history of these people is not long. By the end of the century, various wars with their Delaware, Iroquois, and European neighbors, as well as smallpox, had severely reduced their number. The survivors, estimated in 1697 as forty warriors plus women and children, settled at Conestoga, near Lancaster, Pennsylvania. Here, the remainder of the band met a brutal end in 1763, when a lynch gang known as the Paxton Boys murdered them in revenge for wrongs suffered by colonists at the hands of other Indians.

Who were these Susquehannock, or Andaste, or Minqua, or Conestoga, and where had they come from? They have been identified at various times as offshoots of the Tuscarora, as Huron, Seneca, Cayuga, Onondaga, and as Mohawk. Not all of these hypotheses can be correct. Archaeological evidence indicates that they broke off from the other Five Nations Iroquois in New York State during the second half of the sixteenth century. Some linguistic clues to their identity can be found in an unlikely place: a Lutheran catechism published in the Delaware language. Johan Campanius, a Swedish missionary, had learned sufficient Delaware during his mission to New Sweden from 1642 to 1648 to translate Martin Luther’s Catechism into the language (Campanius 1696). Appendixed to this volume is a “Vocabula Mahakuassica,” containing eighty words of the mystery language. The list was reprinted in 1702 with a few additions by Campanius’s grandson, Thomas Campanius Holm, in a volume entitled A Short Description of the Province of New Sweden. These eighty-nine words constitute nearly enough evidence to establish the relation of these Mahkwas, the Susquehannock, to the other Iroquoians.

1. At the time of European contact with inhabitants of the New World, northeastern North America was occupied primarily by Iroquoian- and Algonkian-speaking peoples. Simple inspection reveals the striking similarity between the words from Campanius’s list and the other documented Iroquoian languages. (In Iroquoian, obstruents $t$, $k$, $s$, and $t$ are regularly voiced intervocally. The automatic voicing alternation is not recorded in modern phonemic transcription, but Campanius, accustomed to European orthographies, did differentiate the voiced and voiceless alternants. Thus his adwēgen and modern /atokę/ are phonetically equivalent: [adó:ge].) Note the similarities between the Susquehannock vocabu-

4 For a detailed account of their political entanglements during the seventeenth century, consult Jennings (1968; 1978).

5 The names Andaste and Conestoga are based on the same Iroquoian noun root, probably *-nahst-‘rafter’. Hewitt (1910) suggests another possibility, *-nest-‘mud, clay’. Andaste is simply the Huron form of the simple noun: *ka+nahst+a’ > H. a+ndasl+a’. The name Conestoga is open to several interpretations. The noun is incorporated into one of several possible verb roots, *-okę ‘between’*-o’ ‘be in water’+ *-ke ‘location (the place where)’. Possibilities are thus: *ka+nahst+okę ‘between the rafters’, *ka+nahst+o*+ke ‘where the rafters are in water’, *ka+hext+o+ke ‘where clay is in water’. The first is enticing but ungrammatical in the modern Iroquoian languages, because the verb -okę requires the presence of the dualic prefix te-. A grammatical form is: M. tekana+stokę ‘between the rafters’. The Susquehannock or Andaste language may not have required this prefix, of course, or the prefix may simply have fallen out of the name. At any rate, the names Andaste and Conestoga are clearly Iroquoian in origin because of their form.

6 For more discussion of the history and prehistory of the band, see Kinsey (1977).
lary and cognate forms in the other Iroquoian languages.8


Su. koona 'stoór (=big)' PNI. *kowá:nę́ M. kowá:nę́ Oe. kakwa:nę́ Oo. kowá:nę́ C. kowá:nę́ H. ouen W. (detá)yuwa:nę́ Ch. eıkwa

Su. kaatzie 'kóm hijit (=come here)' PNI. *ká:-tsi-i M. ka:tís Oo. ka:tís Oo. kástsi C. kástsi S. kajistí H. aché T. kástsi

Su. kaatzie 'faat (=jug)' PNI. *ka-šte'i M. kástshe' Oe. kástse' Oo. kástsi 'C. kástš'ë'ta': S. kástšë'ta' H. asseta T. utšé:wa:ch Ch. atsí

Su. uthyista/uthysista 'eld (=fire)' PNI. *-tsis-te M. otsista' Oe. otsisista' Oo. otsisista' C. otsista' S. kástsi:sia' L. asista/azista H. assista/attista W. utsisista T. utsiswé:k

Su. wisk 'five' PNI. *hwístk M. wíshk Oe. wísk Oo. hwís C. hwís S. wísk


Su. onusse 'house' PNI. *-nghs- M. kanýhsa' Oe. kanýhsa' Oo. kanýhsa:yè C. kanýhsa' S. kanýhsos: L. quanoche/canoche H. annonchia W. yánýhsa't T. ú:nýhsë:n N. onusá:q Ch. kánnsul'ti 'room'

Su. hithe/hiýr 'jág (=I)' PNI. *i:' M. i:í:i' Oo. i:' C. i:' S. i:' H. (n)í W. (di:) T. i:'í:i'.

Su. gaia/gaije 'har tu (there is)' PNI. *ká:-ye' M. ká:yé' Oe. ká:yé' C. ká:yé' S. ká:yé' T. ká:yé'


Su. onskat 'one' PNI. *ghski M. ãhska Oe. ukshah Oo. šká:ta: S. ská: L. segada H. escate W. skát Ch. sokwu

Su. chanoona 'tobakspipa (=tobacco pipe)' PNI. *ka-nóñawë(-r-) M. kaný:nàwë' Oe. kaný:nàwë' Oo. kaný:nàwë'ta' H. anondahoin T. kaný:wa:tyà:n Ch. kaný:nówa

Su. zwroncka 'jág förstår (know a language)' PNI. *s-arhğ-kh-a 'M. sahri:kha' Oe. sałi:khà' Oo. sah:khà:kas OoZ. sachorcena C. shá:khùa' S. sàpkha' H. chahéronça

Su. atackqua 'shoe' PNI. *ahthákwa' M. áhta Oe. áhta Oo. ahthákwa' C. ahthákwa' S. ahthákwa' L. atta/atha H. atakwa T. ú:nhkwe:h N. otágwág


Lexical similarities can be due to chance, parallel development, onomatopoeia, borrowing, or common inheritance. The sim-

8 The Susquehannock, here abbreviated Su, is cited in Campanius's original transcription. Glosses are given in the original Swedish from the list in Campanius (1696). Those in English are from his grandson's translation (Holm 1702). The Cherokee (Ch) is from King (1975). The Nottoway (N) is given as transcribed by Wood in his “Vocabulary of the Language of the Nottoway Tribe of Indians” (1820). The Tuscarora (T) is from my own field notes from Mr. Elton Green of browsun, New York, and Mr. Robert Mt. Pleasant, of Six Nations, Ontario. The Huron (H) is taken from Sagard-Theodat (1632). Wyandot (W) is from Barbeau (1960). The Laurentian (L) comes from Biggar (1924). The Seneca (S) is from Chaie (1967). The Cayuga (C) is from my own notes from Mr. James Skye and Mr. Reginald Henry of Six Nations, Ontario. The Onondaga (Oo) is from Hani Woodbury (personal communication), (Oo) from Zeisberger in Horsford (1887), or (Oo) from Shea (1860). * disappeared from Onondaga shortly after the Zeisberger dictionary was compiled. The Oneida (Oe) is from Floyd Lounsbury (personal communication), Abbott (ms.), or my own notes from Mrs. Winnie Jacobs of Syracuse, New York. The Mohawk comes from my notes from Miss Mary McDonald of Akwesasne, New York.
ilarities among these words are far too pervasive to be due to the first three. Some items, such as 'tobacco' and 'otter' could have been adopted along with their referents, but the majority of the terms are simply too basic to attribute uniquely to borrowing. Such words as 'I', 'you', 'big', 'lay', and 'now' are very unlikely loans. The high percentage of basic cognates indicates beyond doubt that Susquehannock was of Iroquoian origin, a fact already suspected by Jesuit missionaries in the seventeenth century.

Identifying the Susquehannock as Iroquoian is only the first step in tracing their ancestry, however. The original Proto-Iroquoians separated into numerous groups and subgroups. Determining exactly where the Susquehannock fit in the history of division and subdivision requires closer examination of their vocabulary in relation to the various distinguishing characteristics of the other languages.

About 4,000 years ago, the Proto-Iroquoians separated into two groups. The members of one were the ancestors of the modern Cherokee, first encountered by Europeans in Virginia, North and South Carolina, Tennessee, Alabama, and Georgia.

Sometime later, some members left the Northern Iroquoian group: the ancestors of the Tuscarora and the Nottoway, first seen in eastern North Carolina and Virginia. After 1712, the Tuscarora began to migrate to New York State, where they live today. The Nottoway language is known only through word lists recorded early in the nineteenth century, shortly before it became extinct. This subbranch of Northern Iroquoian is referred to here as Tuscarora-Nottoway.9

A second subbranch of the Northern Iroquoian group is Huron-Wyandot, probably also now extinct. Champlain first encountered the Huron in southern Ontario in 1609. French missionaries living among them during the seventeenth century left fairly good records of the language. In 1649, the Huron scattered, after battles with smallpox and the Five Nations Iroquois. One group joined other defeated Iroquoians, namely, the Erie, Neutral, and especially the Tionontati, and fled west into the upper Great Lakes area. They later moved to Detroit, Ohio, Kansas, and finally into northeastern Oklahoma (Tooker 1978). The language of this offshoot of the Hurons and Tionontati, referred to as Wyandot, was spoken until the mid-1960s.

In 1534, when Jacques Cartier sailed into the Bay of Gaspe, he encountered a group of Iroquoian-speaking people on a fishing expedition. Fifty-eight words of their language appear with his account of this first voyage. Appended to the account of his second voyage is another list, containing 170 words. The exact identity of this group is not entirely clear. The vocabulary appears to be a mixture of Huron, Mohawk, and some third, unidentifiable Iroquoian language. Sometime between Cartier's last voyage in 1542 and Champlain's visit to the area in 1603, these people, referred to variously as the Laurentian, St. Lawrence Iroquois, Kwedeck, Hochelagan, and Stadaconan, vanished.

The last subbranch of Northern Iroquoian consists of the Five Nations: Seneca, Cayuga, Onondaga, Oneida, and Mohawk. At contact, they inhabited what is now New York State, from the Niagara Frontier eastward toward the Hudson. It

9 Another language or dialect of this subgroup was probably Meherrin, once spoken in the same region, but unattested beyond several town names.
appears that the Cayuga may have left the Northern Iroquoians before the Huron, then later rejoined the Five Nations group, remaining with the Senecas until relatively recently (Chafe and Foster, in press).

The Iroquoian family tree can be represented schematically as shown in figure 1. The question is: where do the Susquehannock belong in this scheme?

2. A glance at the lexical similarities between Susquehannock and the other Iroquoian languages is sufficient to classify them in the same family. The same sort of inspection quickly reveals that Susquehannock resembles the Northern languages much more closely than it does Cherokee. The numbers of cognates shared by Susquehannock and each of the other Iroquoian languages are as follows. Of eighty-nine words, cognates were found for seventy-five.

- Cherokee-Susquehannock: 18
- Tuscarora-Susquehannock: 48
- Huron/Wyandot-Susquehannock: 44
- Seneca-Susquehannock: 49
- Cayuga-Susquehannock: 50
- Onondaga-Susquehannock: 59
- Oneida-Susquehannock: 57
- Mohawk-Susquehannock: 57

Data from Nottoway and Lauentian are too limited to yield comparable results. Lack of accessibility to speakers is probably also partly responsible for the low Huron-Susquehannock figure.

The fact that certain cognates were not found in some languages does not mean that they do not exist. Words can undergo sufficient semantic shift to make cognates difficult to track down, especially when native speakers cannot be consulted, as for Huron. Incorrect or imprecise transcriptions and translations can render forms totally unidentifiable. Among the Northern Iroquoian languages, the numbers of cognates are much too close to each other for their comparison to be meaningful. A slightly different selection of vocabulary could easily yield different results in which, for example, Huron could show a few more cognates than Mohawk. Especially given the close relationships among all of the languages, a finer method than brute summation of a small set of cognates from a random list is called for.

The method consists of identifying shared innovations in linguistic change. If two languages share a feature not present in the parent language, it is more likely that they made the innovation jointly, before separating from each other, than that they developed it independently. For purposes of subgrouping, it is crucial not only to identify special similarities among languages but also to distinguish joint innovations from joint retentions. Applying the method to the problem of subgrouping Susquehannock within Northern Iroquoian thus involves identifying innovations within each subbranch of the family and then matching one set to those in Susquehannock. I begin by considering the status of each lexical item on Campianus’s list.

3. If Susquehannock can be shown to share a number of lexical innovations with the languages of a particular subbranch of Northern Iroquoian, this constitutes evidence for grouping it with that subbranch.

3.1. Innovations shared uniquely by Tuscarora or Nottoway and Susquehannock would indicate that the Susquehannock were originally part of the subbranch of Northern Iroquoian that moved south. There are no words on the Susquehannock list which are also found only in Tuscarora and/or Nottoway, however. All
Fig. 1
shared cognates have cognates in at least one of the other languages as well, which shows that they are parallel retentions rather than joint innovations. This is not surprising, given the lower total number of cognates Susquehannock shared with Tuscarora than with any of the other Northern languages. There is no lexical evidence for classifying Susquehannock with Tuscarora-Nottoway.

3.2. In the seventeenth century, Father Paul Le Jeune suspected that Susquehannock was closer to Huron than to the other Northern languages. Of all of the words on the Susquehannock list, one has a cognate in Huron but not in the other Northern languages. It is not clear whether this is an innovation or a retention, however.

'bear'
Su. kanjooga 'biorn' H. agnouoin W. xanyonyig' M. ohkwâ:jri Oe. ohkwâ:li
Oo. ohkwâ:ih C. hnyâ:kwai'S. nyakwai'
T. uhtsihr' Ch. yona

On the other hand, a set of numbers indicates that Susquehannock did not participate in certain Huron lexical innovations. Of course it is not possible to date these innovations beyond noting that they were present by 1623, when Sagard recorded them for the dictionary published nine years later.

'six'
H. houháéa Su. jajáck M. yâ:ya:k Oe. yâ:ya:k L. aiaga 'seven' T. 'úhya:k N. oyag C. hyei' S. ye:i'
'seven'
H. sotaret Su. tzadack M. tsá:ta/tsyâ:ta
Oe. tsya:ták Oo. tsya:ta'k C. tseyâ:ta'hk
S. tsai:ta:k L. judei séix 'six' T. tseyâ:na'k H. chatag Ch. su:ta:li 'six'
'eight'
H. atteret Su. tickeron Oe. têkl'y' Oo.

3.3. If it can be shown that Susquehannock shares a number of Five Nations innovations not shared by Huron and Tuscarora, we can posit a Proto-Susquehannock-Five-Nations community which remained together after Tuscarora and Huron had left the Northern branch.

A root meaning 'liquid' appears at first to constitute just such an innovation.

* -hnek- 'liquid' Su. oneeghâ|caneega 'watn' M. ońné:ka' 'whiskey' Oe. ońné:ka' C. ońné:ka' S. ońné:ka'

* -wê 'water' H. aotien L. ame T. à:wê¹¹
N. awwâ Ch. ama:

This root is also used as a liquid classifier, incorporated into verbs when the patient is liquid.

* -hnek-ehr- 'drink' Su. canaquássa 'dricka' M. kahné:kîhra 'it drinks' Oe. kahné:kîhæ 'it drinks' Oo. kahné:kîhæ 'it drinks' C. kahné:khe'a 'it drinks' S. kahné:khe'a 'it drinks'

* -hne:/-ehr- 'drink' H. achixrat 'il boit' T. kydêhrâ 'it drinks' N. aarher 'for him to drink' Ch. atihtha 'drink'

There is also a liquid classifier ne in Cherokee, although it does not appear in the verb 'drink'. It occurs in the following stems:

10 Alternative number systems can, of course, coexist within a language. See Lounsbury (1946).

11 There is a Tuscarora word uhnâ:kyâeh 'sap' or 'juice', but the n shows that it is a borrowing from the Five Nations languages, not a cognate. *n > T. i except before nasalized vowels, so the cognate form would be uhtâ:kâyâeh.
Ch. -ne:ne- ‘give him something liquid’
-ne- ‘have something liquid’
-ne:ki:s- ‘fetch something liquid’
-ne:ki: ‘pick up something liquid’
-néhat ‘find something liquid’
-newi:t ‘carry off something liquid’
(M. -hnek-ani ‘lend him something liquid’)

The root -hnek- is thus a retention and not an innovation. Actually, the competing roots for ‘water’ both exist in the modern languages.

‘whiskey’ M. ohné:ka’ Oe. ohné:ká’ Oo.
ohne:ka’

‘water’ M. ohné:kanos Oe. ohné:kanos
Oo. ohné:kanos (-nos = ‘cold’)

‘in water’ M. awvé:ke Oe. awvé:ke Oo.
awvé:ke (-ke = locative)

All of the languages also share a verb *-at-
awg ‘swim’ as well.

If we are willing to admit the possibility of copying errors, the number ‘four’ can be interpreted as a Susquehannock-Five-Nations innovation. We would have to hypothesize that in the Susquehannock form, an original c was taken to be r, and r to be n.

*ka-yer-i ‘four’ Su. rajine [cajere] M.
kayé:ri Oe. kayé Oo. kayé:ih C. ké:i: S.
ke:ih

*hé:nahk H. dac W. dahk T. hé:nahk N.
hentag Ch. nág:gi

The Five Nations word is an analyzable verb ‘it is right, correct, straight’, perhaps describing the equivalence of two fingers on each hand or the magic associated with the number four. The other word, *hé:nahk, is not analyzable, a fact which could suggest greater antiquity of the form.

Two other Susquehannock words appear at first to show Susquehannock’s failure to participate in some Five Nations innovations, one for ‘deer’ and one for ‘stone’.

‘deer’

M. oská:nú:tu' Oe. oská:nú:tu' Oo.
skéné:tu' Su. haagw H. ausquoy ‘caribou’ T. á:kwa:t N. aqua Ch. áhwéi

Huron and Wyandot both show a term cognate to the Five Nations word, however, in addition to their Proto-Iroquoian cognates.

H. sconoton ‘cerf’ W. skéné:tu’ ‘deer’
The Huron could, of course, be borrowed from the Five Nations, but because of the competing forms, there is no solid proof that the Five Nations word is an innovation. Both words could just as well be retentions.12

A word for ‘stone’ is a similar case.

*nej-M. oné:ya Oe. oné:ya’ Oo. oné:ya’ S.
oné:ya’

*ro:j- Su. karwín/karwinta ‘steen’ H.
reinda/arhonta T. uhú:nahéh N. oruntag
Here, the Cherokee ná:ya ‘stone’ shows that both are retentions from competing words in the parent language.

In sum, the Campanius list is too limited to determine whether Susquehannock shared many Five Nations lexical innovations. The only cases where the Five Nations languages appear to differ from the rest of Northern Iroquoian turn out to involve parallel retentions or copying errors. Lexical considerations thus provide no basis for classifying Susquehannock either with or apart from the Five Nations group. Innovations still could be found within one of the subgroups of the

12 Support for the early existence of this form in Mohawk comes from the journal of a Dutchman, Harmenmyndertsz van den Bogaert: aque lt pel’t (‘=deer’). Modern Mohawk speakers refuse to recognize the first term, however. Van den Bogaert’s word list, transcribed in 1634-35, was probably the first Mohawk ever recorded, but because he also encountered Oneida and Onondaga, it is not clear that the list is pure Mohawk. This word aque, then, has either disappeared from modern Mohawk or was taken from another language. The van den Bogaert manuscript is now in the Huntington Library, Pasadena, California (HM 819). It has been printed in Jameson (1909).
Five Nations which would reveal a specific relationship between one of the Five Nations and Susquehannock.

3.3.1. If Susquehannock can be shown to share innovations with Seneca and Cayuga, this would indicate that the Susquehannock remained part of this western group after the eastern group (modern Oneida and Mohawk) had separated from them. One such innovation is the word for 'beaver'. This is also shared by Onondaga.

The western word appears to be of recent origin because it is a descriptive term built on a verb root 'bite' or 'cut', with an incorporated noun root meaning 'bark'.

Susquehannock shares an animal term with Seneca and Onondaga, but not Cayuga. It is a descriptive term for the 'fisher', a small animal prized for its fur. Su. skajaano 'Fiskiare skin: see uth som sabbel och are drybare' (= 'Fisher skin: looks like sable and other valuable ones') S. skyapuno'ke'fisher' ('Martes pennanti' = lit. 'the one who has put the track together') -yan'footprint, track' Oo. skyaninis 'fisher' = lit. 'the one whose track is long'.

I have found no one who knows a term for this mammal in the other languages, or who knows of another animal by this Iroquoian name.

A term meaning 'for free' has cognates in Seneca and Cayuga, and possibly Onondaga.

Su. schaenu 'Gif mig thetta) für intet' 'Give me this for free' S. skqenob'sko'h C. skqenot'sko: 'Give me this for nothing' OoS. skehion 'Je donne) gratis'

There are several western innovations which Susquehannock did not share. Seneca and Onondaga generalized a different word for 'bread': *-hrakhw- 'bread' S. oækhwa'/æ:khwa' Oo. ohækhwa'

*-na'tar- S. kanadra/ma'dra M. kanad:tarə Oo. kanad:talə C. onad'ata' H. andatarone Ni. nda:ta:ra T. tara:na:ra

Susquehannock did not share the Seneca and Cayuga terms for 'otter' and 'six'.

'Six'
S. ye:i'C. hyei'Su. jagack M. yapak Oo. yapak L. aiaga 'seven' T. úyak N. oyag

In both of these cases, Susquehannock retained the Proto-Northern-Iroquoian form. The western words for 'otter' are descriptive, built on a verb root 'to slide away'. The word tawinone is unanalyzable, which indicates the greater age of the form. The Tuscarora and Nottoway words for 'six' show that the word based on -yak also goes back to Proto-Northern-Iroquoian.

Seneca and Cayuga both lost a stem for 'seed' or 'corn', which Susquehannock retained in onëste. This loss could, of course, have happened independently in the two languages long after their split. The fact that two stems *-nëhi- and *-nëh- were already in competition in Proto-Northern-Iroquoian is clear from the retention of both in Huron and Tuscarora.

* -nëhi- S.-C.-Oo. (Shea) oninckta 'pepin' (Oo. nëst-'vagina') Oe. onëste 'corn' M. onëste 'corn' H. onesta 'seed' W. tsangstata 'seed' T. unësnahe 'seed'

*-nëh/*-nëh- S. onëg' 'corn' C. onëg' 'corn' Oo. onëha 'corn' Oe.-
In sum, Susquehannock shares the new Seneca, Cayuga, and Onondaga word for ‘beaver’, the new Seneca and Onondaga word for ‘fisher’, and the Seneca and Cayuga word for ‘gratis’. (Since Cayuga appears to have separated briefly from Northern Iroquoian before Huron, it is not surprising that it does not always match Seneca and Onondaga.) Susquehannock does not share the Seneca and Onondaga words for ‘otter’, ‘six’, and ‘bread’, nor the loss of the stem *-nghs-. The western nations have been in close contact throughout most of their recent history, so shared lexical items could easily be the result of diffusion rather than joint innovation. The words for ‘beaver’ and ‘fisher’ could have spread this way, particularly given the Susquehannocks’ reputation as fur traders. For this reason, the strength of the evidence for classifying Susquehannock as a western Five Nations language, on the basis of shared lexical innovations, is called into question. At the same time, the Seneca-Onondaga innovation for ‘bread’ could also have been borrowed long after the languages had separated, so this evidence against a western subgrouping of Susquehannock is also weak. Finally, the shared loss of the noun root *-nghs- means little for subgrouping because languages can so easily lose the same words independently, particularly where competing forms are involved, as here. Lexical comparisons turn out to provide little evidence one way or the other for grouping Susquehannock with the western languages.

3.3.2. Shared innovations with Onondaga could constitute evidence for a Proto-Central-Five-Nations community consisting of Onondaga and Susquehannock.

Onondaga shows two pertinent lexical innovations not shared by the other Five Nations languages. Susquehannock shares neither.

‘ax’
Oo. a'skwēhə'su. adōgen/hadoogan M. atō:kq' Oe. atō:kq' C. atō:kq' S. atō:kq' L. addoq'eh/addoué H. atuhoi/aten W. atu,yq' T. a'nui:kq'

‘otter’
Oo. skwā:yę Su. saddahvijnха M. tawine Oe. tawine H. tsabouineq W. tawine'dę' C. tšo'te:trq' S. (o)tawę:te'q' T. tsyuraniha'

Of course, it is not possible to date these innovations. We do know that they were present by the end of the seventeenth century, when they were recorded in the dictionary edited by Shea (1860).

Lexical comparison thus provides no basis for positing a special joint Onondaga-Susquehannock period, but, especially in the absence of dates for the replacement of ‘otter’ and ‘ax’, evidence against such a period is also very weak.

3.3.3. Oneida and Mohawk do share numerous lexical innovations which occurred before they separated. If Susquehannock can be shown to share these as well, a Proto-Susquehannock-Oneida-Mohawk community is indicated. One word apparently shared only by Oneida and Mohawk has a Susquehannock cognate.

‘turkey’
Su. skārwha ‘kalkoon’ M. skawirō:wane Oe. skawilō:wane OoZ. netachróchwa C. shohq:t S. o'só:qi H. ondetontaque M. "du"de'tota' T. k̥me' N. kunum

If the h in the Susquehannock form is interpreted as n, it is even closer to Mohawk and Oneida. The word for ‘turkey’ appears to be fairly recent because it is analyzable: s- ‘the one who’, ka- ‘it’, -wir- ‘baby’, and -owahę́ ‘big’.
Another word shared by Susquehannock, Mohawk, and Oneida also appears in the Laurentian and Huron data. 'pot, kettle'

Su. o'wit'rack M. ú'ia Oe. ú'ták L. Undaco/undacco H. yonton T. (Lawson) ocnock

The Tuscarora word recorded by Lawson (1709), which is clearly cognate, indicates that this is a retention, however.

There are certain lexical innovations common to Mohawk and Oneida which are not shared by Susquehannock. The agreement between the Tuscarora and Huron words for 'beaver' indicates that the Mohawk-Oneida term might be an innovation.

'beaver'


The Mohawk and Oneida words for 'dog' are also probably innovations.

*é:rharr 'dog' M. é:rharr Oe. é:rharr

*tisir 'dog' Su. chijerw Oo. tsihæ: S. tsi-yæh T. tsir (Ch. kihli)

Mohawk and Oneida have retained the original root for 'ten' in their words for 'twenty, thirty, etc.', but have replaced it in their word 'ten' with a verb meaning it is 'straight, correct, complete'.

*o-yer-i 'it is complete' M. oyé:ri Oe. oyé:lî

*w-ahôshq 'ten' Su. wása Oo. washqh C. washşh: S. washşh L. assem/assen H. assan W. ahsq T. wâhôsq N. washa (M. tewásq 'twenty' Oe. tewáshq 'twenty')

Another eastern innovation not shared by Susquehannock is a term for 'teen', the word combined with the numbers from 'one' through 'nine' to form 'eleven' through 'nineteen'. It also appears in some of the languages in the higher numbers. The older term can be analyzed as *(s-)ka-hre' 'the one)-it-is set on'.

*yaw-A:re‘‘teen' M. yawk:re 'Oe. yawk:lé'
*(s)-ka-hre' Su. schaaro Oo. kâhe' C. skhae' S. skare' H. iskare/escarbet T. òkâhæ' N. skahr

Susquehannock does share one interjection with Mohawk.

Su. achoxa 'straxt' M. (h)óksa 'right away, hurry!'

It does not share the Mohawk innovation for 'eight', however.

Su. tickëróm 'eight' M. sha'té:ku 'eight' (sha'-te-ku 'same two they are')

The new Mohawk term probably describes four fingers held up on each hand.

Susquehannock thus shared with the eastern languages a word for 'turkey', which could have been borrowed, and for 'kettle', which is probably a retention. It did not participate in other eastern lexical innovations for 'beaver', 'ten', and 'teen', nor the new Mohawk word for 'eight'. Lexical evidence for considering it an eastern language is thus weak.

3.4. Where differences between languages are great, as with Cherokee and the Northern languages, lexical comparisons yield clear results. Northern cognates can be found for about 85 percent of the Campanius list, while only about 29 percent of the words have identifiable Cherokee cognates. Lexical comparisons have provided little basis for classifying Susquehannock with any particular sub-branch of Northern Iroquoian, however. At this level, where differences between languages are fewer, the small size of the Susquehannock corpus seriously affects the reliability of conclusions based on shared lexical innovations. Fewer crucial cases of innovations can be found, and the effect of a single misidentification on overall results is correspondingly greater.

13 The results are intensified somewhat because southern cognates can be sought in only one language but northern cognates in nine.
Several factors impede the discovery of lexical innovations.

(a) Borrowing. Words which appear to reflect joint innovation can also be due to successive borrowing among distinct groups. Among the Northern Iroquoians, borrowing was probably quite high. The Iroquois nations occupied contiguous territories and formed a political unit. Intertribal adoption and marriage were common. Furthermore, the languages were sufficiently similar to facilitate multilingualism, which yields optimal conditions for borrowing.

Because of the circumstances surrounding the recording of Campanius's list, it consists primarily of especially "borrowable" items. They are the words which traders would be most likely to exchange upon first meeting. They refer to concrete objects and basic concepts pertaining to trade and hospitality: skin, hide, bear, beaver, elk, deer, fisher, fox, otter, gun, knife, sword, meat, bread, corn, tobacco, clothing, shirt, leggings, shoes, pipe, kettle, dish, fire, water, eat, drink, be full, sit and rest, understand, big, small, good, bad, how much?, for free, money, numbers, I, you, thanks... For this reason, there is a greater than average chance that lexical similarities not reconstructed for Proto-Northern-Iroquoian are not due to joint innovation at all. They may well have simply passed from one language to the next long after the groups had diverged.

(b) Translation and semantic shift. Very free or incorrect translations can render words unidentifiable. Campanius notes the following exchange: Gaija 'Har tu' (="Have you") Testa gaije 'Jag har intet' (="I have not"). It is clear from other data that testa is the negative. From inspection, it might appear that the subject of the verb is marked by the final vowel, -a for second person, -e for first. Actually, this is the same word, spelled two different ways: kā:yę' ([gā:yę']) 'it lays'—'there is/are'. Campanius translates onüssa ojëŋqua 'Rōka toback' (="smoking tobacco"). The second word is clearly ojëŋkwa 'tobacco'. The first word is identifiable as well, but it contains no reference to smoking: *onōhsa 'house'. It must have been used to distinguish tobacco smoked at home from ceremonial tobacco. The translation was probably contextually appropriate but not literal.

Campanius gives the phrase Hoona sattëxeande 'Jag gär nu bort' (="I go now away"). All Iroquoian verbs must contain pronominal prefixes referring to their subjects, but this verb certainly does not contain the first-person subjective prefix k- 'I. The phrase is actually: *onōsah-te-tih 'now you leave' (s-ahtëtih 'you-leave'). It is easy to see how this translation error could be made. A similar error was made in hije zworncka 'Men jag förstår' (="But I understand"). This can only be *i:i sahrōkha "As for me, you understand it". The phrase is ungrammatical because of the lack of agreement between the emphatic pronoun *i:i 'I' and pronominal prefix s- 'you/it'. The ungrammaticality of this and several other phrases suggests that either Campanius was receiving some pidgin Susquehannock or that he constructed some of the phrases on his own. Hanni Woodbury points out an especially plausible explanation in the confusion inherent in speech events of this type: "How would I say 'I will go home'?" "You will go home."

Campanius translates the word jase

14 This pronoun always contains k except in Caughnawaga and Oka Mohawk, where:

\[
k > i / \{-y\}
\]

and Huron-Wyandot, where:

\[
k > x > 0 / \{-w, n\}
\]
‘swager’. ‘Swager’ is the Swedish equivalent of ‘brother-in-law’, but the Susquehannock term is clearly cognate to the term for ‘cousin’ in the other Iroquoian languages. Lounsbury (personal communication) points out that the Susquehannock may well have practiced cross-cousin marriage. Also, since the Susquehannock word was elicited through Delaware, the translation could have been affected.

(c) The coexistence of competing lexical items. The identification of a lexical innovation entails the hypothesis of its absence in the protolanguage. This hypothesis is usually based on absence of the word from other daughter languages. In particular, the absence of a word is not usually demonstrated by the presence of another with the same meaning. The general verb root for ‘eat’ in Mohawk is -k- and in Tuscarora -atshuri-. It is tempting to conclude that Mohawk and Tuscarora verbs for ‘eat’ are not cognate. In fact, there is a Mohawk verb -atshori- meaning to ‘eat something liquid’, as to sip soup, and there is a Tuscarora verb -k-, which incorporates noun roots referring to foods (-atshuri- cannot incorporate) and means to ‘eat up’. Particularly when data must be drawn from dictionaries rather than looking cognates has no parallel on the phonological level. Any word in a language containing a certain phonological sequence can provide sufficient evidence that a given sound shift did or did not occur, that a particular innovation is either present or absent (provided the word was not borrowed). Fewer data are necessary to subgroup with certainty. Finally, there is no parallel danger of competing forms. If there is competition between two lines of phonological development, this is immediately clear.

4. The method involves identifying the sets of phonological innovations particular to each branch of the family. If Susquehannock shows any of these sets, this can be considered evidence that it may have been part of the innovating group, provided the possibility of borrowing can be ruled out.

4.1. The most notable phonological development in Tuscarora-Nottoway involves the alveolars *t and *n. In both languages:

\[ *n > t/\_X, \text{where} \ X \neq \ Y. \]

Susquehannock did not share this innovation.

\[ *-n'ar- 'bread' T. ut'har'eh N. got'återa. \]

Su' canadra M. kanat'aro Oe. \ kanat'talok C. ona'ta: H. andataroni W. ndå:ta'ra'.

In Tuscarora, *t shifted to *n before vowels, but this change did not appear in Nottoway or Susquehannock, as can be seen above.

The back nasalized vowel became centralized in Tuscarora:

\[ *q > q. \]

A number of cognate sets indicate that this did not occur in Susquehannock either.

\[ \{ o \} _{ka} - nat - k'ow 'in town' \]
Since Susquehannock does not share these phonological developments, it must not have been part of the Tuscarora-Nottoway group.

4.2. The most obvious phonological developments in Huron involve velars, alveolars, and *s. Changes involving velars were probably in progress at the time Sagard first recorded Huron in 1623. The other changes were complete.

Velars were spirantized then lost in several contexts:

\[
\begin{align*}
\{k > x > \emptyset \} & \cup \{j\} - \{V\} - \{R\} \\
R = r, n, w, y.
\end{align*}
\]

Susquehannock did not share this change.


*téken 'two' H. téni Su. tigene M. tékeni Oo. tékeni C. tékeni S. tekhi:h T. nái:kti N. dekanee

*t also underwent conditioned change in Huron. The first change can be found in some dialects of Mohawk and Cayuga as well, so it may represent a protodialect split:

\[
\begin{align*}
\{k > j / -y \} & \cup \{k\} \\
\{k > w / -w \} & \cup \{V\} - \{R\} \\
\emptyset & \cup -sh.
\end{align*}
\]

Susquehannock did not share these changes either. The Susquehannock word *tžätie_sit och hwijla*(='sit and rest') can be analyzed: *ts-at-yę2 'you two-reflexive-set'. The dual continuative form of the command does not appear in Sagard’s dictionary, but the singular form does. This set is sufficient evidence that Susquehannock did not undergo the shift.


\[*n > nd except before *k and nasalized vowels:

\[*n > nd / -X

\[X \notin \{k\} \]

Susquehannock did not share this innovation.

*ka-nó:r-ę2 'expensive, dear' H. andorón 'cher' Su. chanooro M. kanó:ryę2 Oo. kanó:ryę T. kanó:ryę

*s was palatalized in certain Huron environments:

\[*s > y / -h \\
\{V\} - \{r\} - \#

Susquehannock did not share this change either. (Recall that the Huron was transcribed according to French conventions by which the digraph ch is used to represent [ʃ].)

*áhsę2 'three' H. hachin W. ahšę2 Su. áxe M. áhsą Oo. áhsą C. áhsę S. sęł L. asčhe T. áhsą N. arsa

*a-ris(r) 'leggings' H. arích Su. uritš'a Su. khaalis M. ká:ris Oo. ká:lis C. ká:šra S. ká:šne N. orisrag

Huron also lost *y intervocally. Note the j in the Susquehannock form below.


Since Susquehannock shares none of the phonological innovations found in Huron, there is no reason to consider it part of this subgroup.

4.3. Modern Seneca, Cayuga, and Onondaga are all distinguished by the loss of
*r. Before its disappearance, the r conditioned several other phonological changes. The fact that these are not the same in the three languages suggests that the loss of r was not a joint innovation, but rather spread by diffusion. The loss of *r is context sensitive in Cayuga but complete in Seneca and Onondaga, so it probably occurred in Cayuga first. *r had disappeared from Cayuga and Seneca but not Onondaga before Benjamin Smith Barton published word lists in these languages in 1797. It does not appear in the Sack Seneca vocabulary of 1757 either. *r thus must have disappeared from Cayuga, then Seneca, then Onondaga.

Some of the major changes involving *r in the western languages are outlined below. In all three, *r became a velar glide following back vowels, and a palatal glide following front vowels.

\[ *r > w / \{ o \} - V \]

\[ > y / i - V. \]

Note that this did not happen in Susquehannock.

*-snore* 'fast' S. osno:we' C. ohsnö:we'
Oo. niyohsnö:we' Su. zatznwi war snaa' 'be quick' M. yohnsö:re' Oe. yosnö:le' T. yuhsü:rae' Ch. atanułi

In Seneca and Cayuga, *r > n / ~. This did not happen in Susquehannock either.

*-karka* 'beaver' C. nakanyá:ko' S. nokanyá:kq̆ S. sanderga:ago Oo. nakáyq̆ki

*karyo:* 'wild animal' C. kanyo:* S. kanyo:* Su. abgaríjw 'Hund' ('dog')

Before its disappearance, the presence of *r altered the color of certain vowels. Finally, it disappeared from some environments in Cayuga and everywhere in Seneca and Onondaga. All of the original *r's remain in the Susquehannock data.

*karis(-ra) 'legging' C. káisra S. káishæ'
Oo. káis Su. khaalis M. káris Oe. kádis H. ariče W. uríša N. orísrag

In Proto-Northern-Iroquoian, stress was penultimate and open, stressed syllables long. In Seneca and Cayuga, stress patterns were modified to take into account syllable count from the beginning of words. Essentially, open, odd-numbered penultimate syllables may be stressed, but if an odd-numbered penult is closed, stress moves to an adjacent, even-numbered syllable. Susquehannock did not undergo this change.

*tékni 'two' S. tekhi: C. tekhi: Su. tugene'
M. tékeni O. téken Oo. tek'ni H. téni T. náekti:

4.3.1. Seneca shows a shift associated with *r-loss which is not found in Cayuga or Onondaga:

\[ *r > y / ob (h) \]

We do not know when this shift occurred but since *r had disappeared by 1757, the y must have been introduced before then. Susquehannock does not show the y in this context.

**tekro** 'eight' S. tekjo' Su. tickerom Oe. teklo' Su. tekq̆' C. tekro'T. náekro'N. dekra

Progressive nasalization in Seneca can alter vowel color:

\[ \text{[æ]} \to \text{[e]} / \{ o \} / \{ n \} / \{ (s)w \} \]

The word for 'knife' shows that Susquehannock did not share this innovation. Compare the last vowels in the words:

**kahrénas 'it cuts' S. karenas > ka'enás 'it cuts' Su. karenach 'knij'**

4.3.2. A noteworthy change in Cayuga is the metathesis of laryngeals in odd-numbered syllables:

\[15] \text{Epenthetic vowels are not counted in the determination of stress. The Mohawk and Susquehannock here contain epenthetic e.}
\[ V' = \frac{V}{(C_1)} - C_2 \]
\[ Vh > \frac{hV}{C_1 - V_2} \]
\[ V = \text{odd numbered} \]
\[ C_1 \neq \text{laryngeal} \]

It is not possible to date the emergence of this metathesis, but we do know that it was present in 1845 when Elliot transcribed Cayuga (Schoolcraft 1852).

The Susquehannock word for 'knife' shows that Susquehannock did not undergo laryngeal metathesis.

The Susquehannock word for 'boat' is:

\[ *\text{k}a-hr\text{\text{\v{e}}}n-as \rightarrow \text{C. kh\text{\text{\v{e}}}nas} \rightarrow \text{kh\text{\text{\v{e}}}nas} \rightarrow \text{ka\text{\text{\v{e}}}nas} \]

Several changes in the western languages cannot be traced in Susquehannock, either because of the breadth of Campanius's transcription, particularly in the case of laryngeals, or because of gaps in the data. It is clear, however, that Susquehannock did not share the major phonological innovations of the western languages, so there is no reason to group it with them.

4.4. On the surface, Susquehannock bears little phonological resemblance to modern Onondaga. *r was lost in Onondaga, but before disappearing it conditioned several changes, one the fronting of following back vowels.

\[
\begin{bmatrix}
*o \\
*o \\
*a
\end{bmatrix}
\rightarrow
\begin{bmatrix}
e \\
\varepsilon \\
\varepsilon
\end{bmatrix}
\]

\[ r > w/\{o\} - V \]

\[ r > \emptyset. \]

Susquehannock shares none of these changes. Compare the final vowels in the words for 'eight' and 'nine'. The back [وغ] has been fronted to [غ] in Onondaga but remained [غ] (ؤم) in Susquehannock.

In the word for 'fast', *r became /w/ in Onondaga but remained unchanged in Susquehannock.

Numerous examples show the loss of *r in Onondaga and its retention in Susquehannock.

Susquehannock thus shares none of the innovations which characterize modern Onondaga. Campanius's list, recorded in the mid-seventeenth century, does closely resemble the language preserved in two early dictionaries which were identified by their publishers as Onondaga.

The older dictionary was published by John Gilmary Shea in 1860 and was dated by him as being from the end of the seventeenth century. It contains none of the sound shifts outlined above for modern Onondaga. *r was still present and back vowels following *r were still back.

The other dictionary was compiled by a Moravian missionary, David Zeisberger, during his visits to Onondaga between 1750 and 1755, although it was not printed until 1887. This dictionary also shows *r and no vowel fronting.

Are these dictionaries really Onondaga? The earlier one was so identified by a Père Antoine, at Shea's request, sometime around 1859, not by the original author a century and a half before. The title of another of Zeisberger's manuscripts is disturbing: "Essay of an Onondaga Grammar or Short Introduction to the Onondaga al.

The date of completion of the Zeisberger dictionary does not appear on the manuscript, but Hanni Woodbury has pointed out that it is given as 1760 in Heckewelder (1971).
Maqua Tongue." The term "Maqua" was normally used in a specific sense to refer to the Mohawks, although it was sometimes applied to all Iroquois in general. Perhaps Zeisberger did not bother to distinguish Mohawk, which retained \( *r \), from Onondaga.

Close examination of the dictionaries reveals tight agreement among the lexical entries in Shea, Zeisberger, and modern Onondaga, even where the other Iroquoian languages differ. The words for 'ax', 'bread', and 'otter' are examples. The modern Onondaga below comes from Woodbury (personal communication) and from Hewitt (1928).

'ax' Shea as'heca Zeisberger ashquechsa
Modern Oo. askw'esha' M. ató:k'k' Oe. ató:k'k' C. ató:k'e S. ató:k'e Su. adw'gen / hadoogan L. addoque/ addowe H. atu-hoin / ato'en W. atu:y'e T. nú:k'q'

'bread' Shea orakkSa Tnisberger iochk'qua Modern Oo- ohzhkwa' (S. oeök'wa'/e:khwa') M. kan:ataro Oe. kan:talok C. oná:'a' Su. canadra/ mnádra H. andataroni W. ndá:tor' T. utá:nareh N. gotateria

'otter' Shea skayı'en Zeisberger squa'jon
Modern Oo. skway:ye M. ta:wjine Oe. twi:nej Su. saddawvjinhat H. tsabay-inq C. twi:na[dê C. tsyoy'teq' S. (o)taw;eq' T. tsyuranúha'

In addition, the numbers match both a set identified in 1666 as Onondaga by George Alsop and the modern numbers, but they do not quite match the whole set of numbers in any of the other languages. Alsop, Shea, and Zeisberger all agree completely with modern Onondaga, aside from sound shifts. (It appears that the author of Shea's manuscript had access to Alsop's list to supplement his own.) They also agree with Susquehannock. They disagree with Mohawk in 'eight', 'nine', and 'ten', with Oneida in 'ten', with Cayuga and Seneca in 'six' and 'nine', with Huron and Wyandot in 'four', 'six', 'seven', 'eight', and 'nine', and with Tuscarora and Nototway in 'one' and 'four'. Because of these and many other such sets of lexical items, it is clear that the Shea and Zeisberger dictionaries really are Onondaga.

Since it is the sound changes involving \( *r \) which distinguish modern Onondaga from Susquehannock, it would be useful to know when they occurred. In an Onondaga vocabulary recorded by Abram LaFort (Schoolcraft 1852), there are no instances of \( /r/ \). Shea verified the lack of \( /r/ \) in Onondaga in 1859 in his introduction to the dictionary. In 1883, Horatio Hale reiterated the fact that Onondaga, Seneca, and Cayuga all lacked \( /r/ \). In all of these data, the shift from \( r > w \) has taken place and back vowels have been fronted. The innovations involving \( *r \) were thus complete by 1852.

As far as a starting point for the changes is concerned, they clearly had not taken place by 1666 in Alsop's data, nor by the end of the seventeenth century in Shea, nor by the mid-eighteenth century in Zeisberger. The shifts can be traced through the data below (see also tables 1 and 2).

\[
\begin{align*}
* &\rightarrow w/ \{o\} - . \\
*o'tó:re' &\rightarrow 0'tó:we' 'cold' Shea hó'tóre
Zeisberger otori LaFort (1852) uthowe \\
* &\rightarrow \begin{bmatrix} e \\ q \\ a \end{bmatrix} /r-. \\
r &\rightarrow \emptyset .
\end{align*}
\]

\[*\text{karqyá'ke} \rightarrow \text{karqyá'ke} \rightarrow \text{kaqhyá'ke} 'in the sky' Shea garonhiágue Zieisberger
tiorochjogeu LaFort ka ai wi a ga
*\text{o'wahro'} \rightarrow \text{o'wahæ' 'meat' Barton (1797)}
owachra Shea vahra Zeisberger owachra
LaFort owahéh

From the word lists, it is clear that all of the changes must have occurred within about fifty years or less, between the end
of the eighteenth century and 1852. Ethno-
historical information corroborates this estimate beautifully.\textsuperscript{17} After their villages were destroyed in 1779, the Onondaga left Onondaga and went to live among the Seneca and Cayuga at Buffalo Creek. The Kirkland census of 1789 places their num-
ber at 339 at Buffalo Creek and 47 at Onondaga. In 1794, Pickering reported that a "small number of Onondagas" had arrived at Buffalo Creek from their reservation. They began drifting back soon after the turn of the century and were reported by the Quakers to be 250 strong at Onondaga by 1813, 300 by 1819. The Onondaga were thus in intimate contact with the Cayuga and Seneca, from whom they acquired their $r$-loss, around 1800.

\textsuperscript{17} Jack Campisi brought this information to my attention. For discussion of these migrations, see Tooker (1978).

### Table 1

<table>
<thead>
<tr>
<th>Abop</th>
<th>Shea</th>
<th>Zeisberger</th>
<th>Mod. Go.</th>
<th>Mohawk</th>
<th>Oneida</th>
<th>Cayuga</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. unskat</td>
<td>unskat / skata</td>
<td>skata</td>
<td>skà:tah</td>
<td>ąhska</td>
<td>ąskat</td>
<td>skat</td>
</tr>
<tr>
<td>2. tegni</td>
<td>tegni</td>
<td>tekeni</td>
<td>tê:k'ih</td>
<td>têkeni</td>
<td>têkeni</td>
<td>têkeni</td>
</tr>
<tr>
<td>3. achen</td>
<td>achen</td>
<td>achoo</td>
<td>ąhsqh</td>
<td>ąhsq</td>
<td>ąhsq</td>
<td>ąhsq</td>
</tr>
<tr>
<td>4. gayeri</td>
<td>gayeri</td>
<td>gajeri</td>
<td>kay'ehi</td>
<td>kay'ri</td>
<td>kayé</td>
<td>këih</td>
</tr>
<tr>
<td>5. wisk</td>
<td>wisk</td>
<td>hwiks</td>
<td>ąhska</td>
<td>ąhska</td>
<td>ąhska</td>
<td>ąhska</td>
</tr>
<tr>
<td>6. haiak</td>
<td>haiak</td>
<td>achiak</td>
<td>hîya k</td>
<td>hîya k</td>
<td>hîya k</td>
<td>hîya k</td>
</tr>
<tr>
<td>7. tchiakok</td>
<td>tchiakok</td>
<td>tschoatak</td>
<td>tsyà:tak</td>
<td>tsyà:ta</td>
<td>tsyà:ta</td>
<td>tsyà:ta</td>
</tr>
<tr>
<td>8. rgeron</td>
<td>rgeron</td>
<td>tekiri</td>
<td>tê:k'</td>
<td>shà't'k'</td>
<td>shà't'k'</td>
<td>shà't'k'</td>
</tr>
<tr>
<td>9. waderon</td>
<td>waderon</td>
<td>watiro</td>
<td>wà't'eh</td>
<td>tyó'tt</td>
<td>wà'tt</td>
<td>tyó'tt</td>
</tr>
<tr>
<td>10. -</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Seneca</th>
<th>Susquehannock</th>
<th>Laurentian</th>
<th>Huron</th>
<th>Wyandot</th>
<th>Tuscarora</th>
<th>Nottoway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ska:</td>
<td>onskat</td>
<td>segada</td>
<td>escate</td>
<td>skat</td>
<td>ątsi</td>
<td>unte</td>
</tr>
<tr>
<td>2. tekhi:n</td>
<td>tigene</td>
<td>tigneny</td>
<td>śe:ni</td>
<td>tedi</td>
<td>nà:ki::</td>
<td>dekanee</td>
</tr>
<tr>
<td>3. sih</td>
<td>áxe</td>
<td>asche</td>
<td>hachim</td>
<td>ahşę</td>
<td>hş:ahk</td>
<td>ara</td>
</tr>
<tr>
<td>4. ke:ih</td>
<td>rajene</td>
<td>honnacon</td>
<td>dac</td>
<td>dâhk</td>
<td>hş:ahk</td>
<td>hentag</td>
</tr>
<tr>
<td>5. wis</td>
<td>wi:sck</td>
<td>ouyscon</td>
<td>ouyche</td>
<td>wí:hs</td>
<td>wíhs</td>
<td>whisk</td>
</tr>
<tr>
<td>6. ye:</td>
<td>jajack</td>
<td>judaie</td>
<td>houha:ea</td>
<td>waushau</td>
<td>wáyag</td>
<td>oyag</td>
</tr>
<tr>
<td>7. tsa:ta:k</td>
<td>izadack</td>
<td>indahirj</td>
<td>sortare</td>
<td>de:tsu:are</td>
<td>tsyá:nahk</td>
<td>chotag</td>
</tr>
<tr>
<td>8. teky:</td>
<td>rickerom</td>
<td>addege</td>
<td>atteret</td>
<td>a *ś:i:xe</td>
<td>nà:k:ro:</td>
<td>dekra</td>
</tr>
<tr>
<td>9. tyoht:</td>
<td>waderom</td>
<td>wadellon</td>
<td>nechon</td>
<td>aintru</td>
<td>níhr:z</td>
<td>deheerunk</td>
</tr>
</tbody>
</table>
The late date of these sound changes indicates that Susquehannock should be compared to the older Onondaga of the Shea and Zeisberger dictionaries rather than to modern Onondaga. The apparent phonological resemblance between Susquehannock and old Onondaga, along with the agreement between their sets of numbers, suggests that a closer examination of their similarities might prove fruitful.

A morphological peculiarity of Onondaga is its most frequent perfective allomorph -i. In the other languages, the most frequent perfective equivalent suffix is -ę or -ę. The Susquehannock list contains an example of this -i perfective.

Su. serwquacksi ‘Tu äst ond’ (=‘you are bad’)

Compare this to Mohawk and Oneida:

M. serihwáksą ‘your affair is bad’

kálíbhwáksą ‘wicked, swear words’

The -i perfective is a retention in Onondaga, however, not an innovation. All of the modern languages have traces of it with some verb roots. Furthermore, this particular verb root *aksę ‘bad’ is not productive in Onondaga. I have found it only in a word for ‘fox’, skęhnáksę (“bad fur”), which is probably borrowed from Oneida skęhnáksą ‘fox’. In addition, note that this root does not even show the -i perfective in its single Onondaga appearance.

Although Susquehannock looks, superficially, very much like old Onondaga, there is no strong evidence for classifying the two together. All of their phonological similarities are retentions from Proto-Northern-Iroquoian. They share merely the lack of innovations found in the other languages. The numbers, also shared only with Onondaga, are likewise retentions. In those cases where Onondaga has innovated away from the other languages, namely in the words for ‘ax’, ‘bread’, and ‘otter’, Susquehannock did not follow.

4.5. Several joint phonological innovations distinguish the eastern languages, Oneida and Mohawk, from the others. *r remained [r] in some dialects of Mohawk but shifted toward [l] in others and in Oneida. This difference can be seen in Barton’s data published in 1797.

P. M-Oe. *é:rhar > Oe. é:lhal ’dog’ Barton (1797) Oe. alehaul

The Susquehannock vocabulary contains both r and l.

*r > l

karis(ra)’ ‘leggings’

Su. khaalis Oe. ka:lis M. ká:lis M. ká:ris Oo. (Zeisberger) gariehsa’ H. ariche N. orisrag

*r > r

*(a)rotat- ‘blow’

Su. kahwroonta/karwda ‘gun’ (‘it shoots’) M. karù:tats ‘it shoots’ Oo. waé:ltats ‘it blows’ H. sarontat ‘souffle le feu’ C. saq:ta: ‘blow’ wáq:ta: ‘it blows’ Oe. kalù:tats ‘it shoots’

An alarming explanation for this variation could be that the Susquehannock list is a composite one containing words obtained from speakers of different languages. Susquehannock, in this case, might not be a language at all, but rather a mosaic of several of the Five Nations languages.

Given the distribution of the liquids, however, this is probably not the case. The list contains thirty-two instances of r and two of l. Furthermore, one l occurs in a word containing r.

Su. sarakáliw ‘skiuta’ (=‘shoot’)

A more plausible explanation comes from the probable phonetic values of the original liquid *r. In modern Mohawk, pro-
nunciation of this sound varies from constant, unambiguous \([r]\), particularly at Caughnawaga and Oka, through alternation between \([r]\) and \([l]\) at Ahkwesahsne and Six Nations. Sagard’s Huron shows both \(r\) and \(l\), even within a single word, as in *qualairio* ('le cry qu’on fait par la ville pour inviter à la danse'). Gallatin (1836) shows this sound recorded as \(r/\) by S. E. Dwight. Zeisberger also shows such alternation, as in his entry *hatroliachre* ‘he said it’. Note the alternants in the set below.

\[*-atro- ‘be a friend’ M. (Dwight) kootturhlo Oe. lonati:lo Oo. (Zeisberger) olile/ortie Su. agændeero H. atoro T. yakya:nh:ru*]

Susquehannock must have reflected the original, ambivalent sound.

A second shift distinguishing the eastern languages occurred in the nasalized vowels.

\[*\(\xi\) \(\rightarrow\) \(\lambda\)*
\[*\(\varphi\) \(\rightarrow\) \(\eta\)*

Determining whether Susquehannock shared this shift involves an analysis of Campanius’s transcription. The following words illustrate his rendition of the reflex of the front vowel. Double letters were generally used for long vowels.

\[*Su. adwgen / hadoogan ‘axe’ (=‘ax’), koonæ ‘stoor’ (=‘large’), Onæsta ‘sæd eller magiz’ (=‘seed or corn’), agændeero ‘wij äre gode wänner’ (=‘we are good friends’), ihadeero ‘min synnerlige gode wän’ (=‘my especially good friend’), hoona / honan ‘nu’ (=‘now’), sattænde ‘jag gør nu bort’ (=‘I go now away’ [sic]), gäija / gjije ‘har tu’ (=‘have you’ [sic]), washa ‘ten’, äxe ‘three’, ojeenquä / ojèngquä ‘toback’ (=‘tobacco’), skaddanijnu ‘Will you sell or barter something?’; anhooda ‘What?’*

The range is:

<table>
<thead>
<tr>
<th>e (3)</th>
<th>en (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>æ (3)</td>
<td>æn (1)</td>
</tr>
<tr>
<td>a (5)</td>
<td>an (2)</td>
</tr>
</tbody>
</table>

The Susquehannock vowel was probably a front one. Although \(a\), \(an\), and \(en\) could have been used for either \([\lambda]\) or \([\varphi]\), \(e\) and \(æ\) would be unlikely choices for \([\alpha]\) on the part of a Swede.

The range of the back nasalized vowel in the modern languages is large. It moves from \([\varphi]\) to \([\alpha]\) in Seneca and sometimes as high as \([u]\) in Cayuga. In Mohawk and especially Oneida, it varies between \([u]\) and \([\varphi]\), although the target is closer to \([u]\). Campanius represents the Susquehannock reflex of this back vowel as follows.

\[*\(\varphi\)*


The results are as follows:

<table>
<thead>
<tr>
<th>u (3)</th>
<th>un (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>wn (1)</td>
<td>own (1)</td>
</tr>
<tr>
<td>o (4)</td>
<td>om/on (6)</td>
</tr>
</tbody>
</table>

Susquehannock seems to have had the same variation as the other languages, but the target appears to have been closer to \([\alpha]\) than to \([u]\). Susquehannock did not share the eastern shift in the nasalized vowels.

A third characteristic of Oneida and Mohawk is the loss of laryngeals under stress, leaving length and falling tone.

\[\mathbf{V} > \mathbf{\tilde{V}}: \mathbf{CV}^{\mathbf{\hat{}}}\]
\( \tilde{V}h > \tilde{V} : / _{-}RV (R = n, r/l, w, y) \).

*kan\'taro k ‘bread’ > M. kanå:taro Oe. kanå:talok

*yåhya'k ‘six’ > M. yå:ya'k Oe. yå:ya'k

This rule was present when Bruyas compiled his Mohawk dictionary between 1667 and 1700, but this is not surprising since Mohawk and Oneida share the rule and were distinct well before contact.

*okåhra’ > okå:ra’ = Bruyas okara ‘oceil’ (=’eye’)

M. kakaharakarowáhu = Bruyas kagar-gaton ‘pocher l’œil’ (=’get a black eye’)

To determine whether Susquehannock shared this rule, it is necessary to be able to recognize the presence or absence of vowel length and preconsonantal /h/ or /\?/ in Campanius’s transcription. Campanius usually did record vowel length with double vowels.

*ohné:ka’ = [ohné:ga’] = Campanius’s oneega vatn ‘water’

*atô:ke’ = [adô:ge’] = Campanius’s hadoogan ‘ax’

Short, stressed vowels are usually represented by single letters.

*ahtákwa’ = [ahtahkwa’] = Campanius’s atackqua ‘shoe’

As can be seen from the above, preconsonantal laryngeals were not transcribed systematically. In some cases, two letters were used to record combinations of stops and laryngeals, but this is not consistent. Elsewhere two letters represent single stops, while stops plus laryngeals are transcribed with single letters.

*sahitéi = [sahd¿di] = Campanius’s sattæ-xende ‘go away’

*sahró:ka’ [sahró:kha’] = Campanius’s zwronck’a you understand’

But, *skad¿hni:nö = Campanius’s skaddanijnú ‘you barter’

The Susquehannock corpus contains cognates of several of the words which exhibit laryngeal loss in Oneida and Mohawk. The stressed vowels in all but two are recorded as short.

*(ar)a’se ‘be cousin to’ Su. jase Oo. (Shea) aguirase C. qhya’se;’ W. ejara”se’ T. kyará’seh M. kya:se’ Oe. lajá:se’

*yåhya’k ‘six’ Su. jajack Oo. åhya’k Oo. (Alsop) hatak Oo. (Shea) hayak Oo. (Zeisb.) achiak T. úhya’k N. oyag M. yå:ya’k Oe. yå:ya’k

*na’tar- ‘bread’ Su. mnádra/canadra C. oná’ta;’ T. utá’náræ M. kanå:tao Oe. kanå:talok

One word shows a variant with a long vowel.

*oyé:kwa’ ‘tobacco’ Su. ojeengqua/ojéngqua Oo. oyé:kwa’ C. oyé:kwa’ S. oyé:kwa’ M. oyé:kwa’ Oe. oyé:kwa’

Another shows a double vowel.

...-karyak-k’-cut, bite’ Su. sandergaagxo ‘beaver’ Oo. nak:ya’kì Oo. (Shea) nagariagui Oo. (Zeisberger) nagarriákí C. nakanyá(’ko)’ S. nöknanyá’køh

From these data it appears that Susquehannock, unlike Oneida and Mohawk, generally did not replace laryngeals with length and falling tone. The situation was probably more like that in Cayuga, where stressed vowels followed by glottal stop may trail somewhat in creaky voice.

4.5.1. Three Oneida developments are not found in the other Iroquoian languages. One is the conditioned devoicing of utterance-final syllables. This was already observable when Barton published his Oneida notes in 1797.

*owáhrö’ > Oe. owá:ly̆ = Barton’s owauh ‘meat’

There was no such devoicing in Susquehannock.

In some dialects of modern Oneida, word-initial vowels are preaspirated.

\( \emptyset > h/ # _{-}V \).

This preaspiration does appear as a variant in Susquehannock. Susquehannock also does not seem to have undergone the Oneida accent shift, whereby stress moves
to the right over single consonants, since no accents appear finally.

Su. ad̄wegen/hadoogan ‘ax’ Oe. a10:kọ:t̄/hato:kọ:t̄

Su. hije/hijr ‘jag’ (=’1’) Oe. i:(i)/hi:(i)

Su. hoona/horan ‘nu’ (=’now’) Oe. o10:n/hono:n ‘now’

4.5.2. Mohawk is characterized by the insertion of epenthetic /e/ between obstruents and resonants. This epenthesis was already present when Bruyas compiled his root dictionary, between 1667 and 1700. Surprisingly, Susquehannock also shows epenthesis in this context.

*atshr- ‘dress’ Su. kätzera ‘kláde’ (=’clothes’) M. asheriniya M. (Bruyas) atseronni ‘shabiller’ Oe. ashlunyáhkwa Oo. kahshé:nyáha ‘undressing’ C. kathre:nha S. kasygni:n

*tékro ‘eight’ Su. tickerom Oe. téklu’Oo. té:kro’ T. nà:krro:’ N. dekra

*wap’ro ‘nine’ Su. waderom Oe. wà:lu’

*tékni ‘two’ Su. tiggene M. tékeni Oe. té:ken Oo. té:kn C. te:khni: S. te:khni: T. nà:ki:

This is unexpected, since Susquehannock did not share joint Oneida-Mohawk innovations. These epenthetic vowels, however, also appear sporadically in the Shea and Zeisberger dictionaries of Onondaga and in the numbers published by Alsop in 1666.

‘eight’ Su. tickerom Alsop tegeron Shea
tegueron Zeisberger tekiro

‘nine’ Su. waderom Alsop waderom Shea
waderom Zeisberger watiro

Most of the contexts in which epenthesis occurred were eliminated from Onondaga with the loss of *r. Between obstruents and /ni/, however, suggestions of non-distinctive epenthesis appear freely in modern Onondaga. This was also true earlier, to judge from the older records.

Su. tiggene ‘two’ Oo. (Alsop) tegni Oo. (Shea) tegni Oo. (Zeisberger) tekeni Oo. (modern) têk*:nih

The other languages show such epenthesis sporadically in records or pronunciation. Nottoway shows dekanee for ‘two’, Laurentian wadelleon for ‘nine’. This epenthesis is probably not an innovation developed jointly with Mohawk, but rather a natural tendency inherent in the languages.

Another development distinguishing Mohawk is the loss of word-final /t/ and /k/ following vowels. Susquehannock did not share this either.


This is to be expected, since the loss in Mohawk is quite recent, probably about 1900. The stops were still present in Bruyas’s transcription from the end of the seventeenth century and in van den Bogaert’s from 1635.

Bruyas: ontaek; van den Bogaert: ondack

Since Susquehannock does not share the loss of laryngeals under stress nor the shift in color of the nasalized vowels, and the epenthesis appears to be the result of a general tendency in Iroquoian rather than a joint innovation, there are no reasons for classifying Susquehannock with the eastern languages, Oneida and Mohawk.

5. Lexical comparisons have turned up no compelling evidence for classifying Susquehannock with any particular subbranch of Northern Iroquoian. Phonologically, it shared none of the innovations found in the other modern languages. It looks most like the Onondaga recorded in Shea and Zeisberger, but the similarities are the result of common retentions rather than
joint innovations. Susquehannock did not share lexical innovations particular to Onondaga.

Susquehannock thus differs from the other Five Nations languages no more than they differ from each other, yet it shows no joint innovations with any of them. These results are summarized in figure 2.

6. Vocabulary contained in Campanius (1696).

Itaeeetins, En Mann.
Aconbaesst, Quinna.
Jase, Swager.
Generad, Good Wan.
Agaendeer, Wi are gode Wänner.
Iinhadeeuero, Min synnerlige gode Wan.
Otskaëna, From, Good.
Zatziore, Kooka.
Oróquéue, Kött.
Mnádra, Canadra, Bród.
Oanaeta, Söd eller Magiz.
Oonegha, Canega, Watn.
Caneguëss, Dricka.
Tzátiic, Sitt och hwjila.
Sisschiëro, Úta.
Náha, Ja.
Honan jaijvo, Jag är nått.
Taeta, Neij.
Hijt, Ja, Hinf, Du.
Gáija, Har tu.
Hijve, Undra saker.
Téstá gáije, Jag har intet.
Ahghháara, Úr the Barbarers penningar.
Skajaano, Fiskiare Skin/ see uth som Sæbel och åre dyrbare.
Sanderjarago, Bæmer.
Saddahvijnhae, Uter.
Kanjooga Ajung, Bjornhuud.
Hrwha, Úlghhuud.
Sishw, Råf.
Skáirwha, Kalkoon.
Háque, Skin.
Kajunckëke háque, Swarta Skin.
Kaatzie, Kom hijt.
Avaruni, Stoor tack.
Zatznwi, War snaar.
Achóka, Strax.
Kareenach, Knij.
Káter, Kláde.
AEunjw, Skiorta.
Khaalis, Strumper.
Kahwoonta Karëda, Bóss,
Kzaeequara, Wárja.
Oëntack, Grnta/Kittil.
Kaatzie, Faat.
Karwëmn, Steen.
Chanoona, Tobakspiipa.
Ojeengquau, Toback.
Onüse Ojëngquau, Röka Toback.
Adwägen, Hadoogan, Axe.
Uthysta, Eld.
Koonae, Stoor.
Stùnga, Lijten.
Tzidtze, Katta.
Abgärjw, Hund.
Sarakålïw, Skiuuta.
Taësta Zwrócka, Jag förstår intet.
Hije Zwrócka, Men jag förstår.
Serwquéacksi, Tu åst ond.
Tinnigoo otchworha, Huru muckit penningar wil tu hafwa therföre.
Taësta gáyw, Har tu intet.
Kássha schæaeænæ. Gif mig thetta för intet.
Hoona Sattæææende, Jag gar nu bort.

Modus Supputandi MAHAKUASSORUM.

Onskat 1
Tiggene 2
Axe 3
Rajéne 4
Wisck 5
Jajåck 6
Tzadack 7
Tickerom 8
Wåderom 9
Wása 10
Onskat schaarö 11
Tiggene schaarö 12
Axe schaarö 13
Rajene schaarö 14
Wisck schaarö 15
Jajåck schaarö 16
Tzadack schaarö 17
Tickerom schaarö 18
Wåderom schaarö 19
Tijkeni 20
Wása ne Wása 100
Wása ne Wása onskat 101
Wása ne Wása tiggene 102
Etc.
Vocabulary of the Minque Language (Holm 1702).

Itaeaetsin. A man.
Achonhaessti. A woman.
Generoo. Good friend.
Agaendeero. We are good friends.
Chanooro hiss. I make much of you.
Jihadaeero. My particularly good friend.
Otzkaenna. Pious, good.
Zatziioore. To boil.
Orocguac. Flesh, meat.
Mnadra, Canadra. Bread.
Onaesta. Indian corn.
Oneegha, Canecga. Water.
Canequassa. Drink.
Tzátie. Sit and stay.
Sischijro. Eat.
Naehhae. Yes.
Taesta. No.
Honon jaijvo. I am tired.
Hije. I.
Hiss. Thou.
Gaija? Have you?
Hijwe. Other things.
Tésta gaije. I have not.
Ahigoora, Zaband. Indian money as above described.
Skajaano. Valuable skins or furs, as sables, etc.
Sandergarjaago. Beaver.
Kanjooga, Ajung. Bear skin.
Hrwha. Elk's skin.
Sissw. Fox.
Skairwha. Turkey.
Háque. Skin.
Kajunckkekháque. Black skin.
Kaatzie. Come here.
Zatznwri. Be quick.
Achóxá. Directly.
Avarünsi. Thank you.
Katztza gaije? What have you got?
Kareenach. A knife.
Kareenach testa hiíe gaijw. I have a knife for you.
Nachac hiss gaije kareenach. Yes, you have a knife.
Taesta Zwroncka. I don’t understand.
Hije Zwroncka. But I understand.
Serwquacksi. You are bad.
Taesta, taesta. No, no.
Aenhoduraada? What will you?
Skaddaniju? Will you sell or barter something?
Anhooda? What?
Katzera. Clothes.
Aanjooza. Linen, shirts.
Khaalis. Stockings.
Atackqua. Shoes.
Kahwroonia, Karwda. A gun.
Kazequara. A sword.
Tinnigjo otthowrwha? How much money will you have for it?
Owntack. A pot, a kettle.
Kaatzie. A dish.
Karwánta. A stone.
Chanoona. A tobacco pipe.
Ojeengqua. Tobacco.
Onisse ojengua. Smoking tobacco.
Adwgen, hadoogan. An axe.
Uthsiista. Fire.
Zaruncka kahwew uthsusta? Can you make fire?
Koona. Great, large.
Stunga. Little.
Tzidtze. A cat.
Abgarijw. A dog.
Testa sis chijerw. The dog does not bite.
Haagw. A deer.
Sarakaliw haago. To shoot deer.
Kassha schaeaeenu. Give me that for nothing.
Chotis chijew. See here what I will give you.
He kakhto schaeaeenu. I will give it you again.
Hoo. May be.
Hoona sattaande. Now I am going away.
Onskat 1
Tiggene 2
Axe 3
Raiène 4
Wisck 5
Jaiack 6
Tzadack 7
Tickerom 8
Waderom 9
Washa 10
Onskat schaaro 11
Tiggene schaaro 12
Axe schaaro 13
Raiène schaaro 14
Wisck schaaro 15
Jaiack schaaro 16
Tzadack schaaro 17
Tickerom schaaro 18
Waderom schaaro 19
Tykeni d. washa 20
Washa ne washa 100
Washa ne washa onskat 101
Washa ne washa tiggene 102
Washa ne washa axe 103
Washa ne washa rajene 104

REFERENCES
ABBOTT, CLIFFORD. Ms. Oneida Dictionary.
ALSOR, GEORGE. 1666. A Character of the Province


Biggar, H. P. 1924. The Voyages of Jacques Cartier. Publications of the Public Archives of Canada, no. 11.


