

How to Avoid Subordination

Author(s): Marianne Mithun

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How to Avoid Subordination

Marianne Mithun
SUNY Albany

We all know that all languages are created equal. We also know that they are equally adaptable to the needs of their speakers, so that different languages will develop vocabulary in different areas. Basket makers, for example, are likely to develop fine lexical distinctions for their materials, techniques, and finished basketry products. Languages even develop different grammatical distinctions, such as highly individual repertoires of pronouns marking various categories of animacy, gender, and social relationships. Are grammatical constructions like subordination amenable to the same type of adaptation, fluctuating according to the conceptual needs of their speakers, or do they represent fundamental human intellectual constants?

In a study comparing spoken and written American English, Wallace Chafe has found that 34% of the idea units (roughly akin to clauses) in conversation are dependent (p.c.). An investigation of spoken discourse in several other languages reveals that these relationships are not at all universal. Oral texts in Mohawk, an Iroquoian language of Quebec, can show as few as 7% overtly dependent clauses. Similar texts in Gungwinggu, an Australian aboriginal language, show 6%. The same type of oral discourse in Kathlamet, a Chinookan language formerly spoken in Washington state, shows only slightly more than 2%. Do these languages have alternative means for accomplishing the functions performed by subordination in languages like English, or do speakers simply choose to accomplish them less often?

1. How to Avoid Subordination

Mohawk, Gunwinggu, and Kathlamet share a significant typological characteristic: they are all polysynthetic. In particular, their verbs contain obligatory pronominal affixes that mark their agent/subjective/ergative arguments and/or their patient/objective/absolutive arguments, whether independent nominals are present in the sentence or not. The result is that any verb can stand as a complete grammatical clause in itself. Compare the verbs in the pairs of sentences below.

Mohawk (Frank Jacobs, Jr. p.c.)*

(1)a.	Ki	raksá:'a	iahoia'teñhawe	ne	rohsótha.
	this	he-child	there-past-	the	he/him-
			he/him-take		grandparent

'So the boy took his grandfather there.'

- b. Iahoia'ténhawe.
'He took him there.'

Gunwinggu (Oates 1964:94)

- (2)a. Gunubewu namegbe namaŋde biraynbom.
maybe that devil he/him-spear-past
'Maybe the devil speared him.'

- b. Biraynbom.
'He speared him.'

Kathlamet (Boas 1901:23)

- (3)a. Aqa igigÉtcax iqá:nuq.
then he-cried beaver
'Now the beaver cried.'

- b. IgigÉ tcax.
'He cried.'

In each of these languages, the proportion of overtly subordinate clauses was calculated from clause counts across several hundred pages of transcription of oral narratives. All of the texts were accompanied by both literal and free translations. The Mohawk and Gunwinggu free translations were provided mainly by the speakers themselves; the Kathlamet narratives were translated by Boas on the basis of information supplied by the speaker in Chinook jargon. Yet even these free English translations contain more subordination than the original texts. If the percentages of subordinate clauses are so much lower in these languages, what is it that speakers translate into English complex sentences? Most frequently, it is simply strings of formally independent clauses. The sequences below were translated into complement constructions.

Mohawk (Cross p.c.)

- (4). Enwá:ton ken ehnskerihóŋnien enkena'tarón:ni?
it will be ? you will teach I will bread
possible me make

'Would you teach me to make pies?'

Gunwinggu (Oates 1964:115)

- (5). Beggan nagudji bininj mangun
she heard one man sugar bag

dedmi'dedmi.
he was chopping down

'She heard a man chopping down trees to get the sugar bag.'

Kathlamet (Boas 1901:62)

- (6). Aqa igiXgé:qawaqa Xá:píX. ILgió:lXam LgoalÉ:lX
 then he dreamed at night it said to him a person
 'At night he dreamed that a person spoke to him.'

The first verb may contain a neuter subject, object, patient, or absolutive pronoun (often expressed as \emptyset), referring to the following clause, or it may contain a pronoun referring to some argument of the second clause, yielding constructions somewhat like the results of raising in English.

Mohawk (Montour p.c.)

- (7). Ónhka'k wahshakó:ken taiakawenonhátie.
 someone past-he/her-see this way-she-go-along
 'He saw someone coming'

Gunwinggu (Oates 1964:92)

- (8). Benbeggan wuḍwuḍ biri'diri
 he/them-hear-past children they-play-present
 'He heard children playing.'

Kathlamet (Boas 1901:59)

- (9). Itcé:qElkEl imó:lak ité:t.
 he-it-see-past an elk it-come-past
 'He saw an elk coming.'

Constructions translated with relative clauses in English also often consist simply of strings of independent clauses in these languages. Since the verbs already contain pronominal affixes, additional relative pronouns are not as crucial for maintaining coreference.

Mohawk (Lazore p.c.)

- (10). Ísi' na'oháhati rên:teron
 over there it is beyond the road he lives

ronatén:ro wahró:ri, ...
 they are friends to each other he told him

'A friend who lived across the road told him, ...'

Gunwinggu (Oates 1964:104)

- (11). Galug bo:gen benewam benedulgnan
 then two (women) they two went they two tree saw

mangaralaljmayn benebidbom gadum.
 cashew nut they two climb up high

'There were two women who saw a cashew nut tree, which they climbed.'

Kathlamet (Boas 1901:59)

- (12). É:kcta iá:p_iaskwal imó:lak, itcinÉltatk.
 look at it its skin the elk he left it as food for me
 'Look at the elk skin which he left here for me.'

Ideas translated into English complex sentences containing adverbial clauses are also expressed by simple sequences of formally independent clauses. Temporal clauses are the most frequent sentential adverbials.

Mohawk (Sharrow p.c.)

- (13). Wahonthahíta. Iahón:newe'
 they took up their road they arrived there

ki: ka'k nó:nwe kiohson'karén:ton.
 this somewhere there hangs a board

'They walked until they reached a bar.'

Gunwinggu (Oates 1964:110)

- (14). Galug mugoy' benedjalbo:ggani
 then still they two still tracked him

benewam benedjulenan...
 they two went they two shade saw

'They continued tracking him till they came to his camp.'

Kathlamet (Boas 1901:86)

- (15). Tci:pa:q qatcXó:tkakoax, po: po: po: po: ne:xElqoé:cqo-ic.
 strongly he stepped he farted

Lá:wa qatcXó:tkakoax, pu pu pu pu ne:xElqoé:cqo-ic;
 slowly he stepped he farted

'When he stepped with long strides, he broke wind loudly;
 when he went slowly, he broke wind slowly.'

Other adverbials, such as the purpose clauses below, also appear as overtly independent clauses.

Mohawk (Hill p.c.)

- (16). Enhskenhón:karon ken aontakatska'hòn:na?
 you will invite me ? I would come and eat
 'Will you invite me to come and eat?'

Gunwinggu (Oates 1964:105)

- (17). Yimen, "Nare dangi naboyman;"
 he said I go close I antheap gather
 'He said, "I am going to gather antheap near at hand."'

Kathlamet (Boas 1901:77)

- (18). Tgt_ió:k_{ti} atxtá:koa, aniogoá:lEmam itcá:k_ie:te:.
 good we return I will go and take my blanket
 'Let us return to get my skin.'

Does this mean that subordination does not exist in these languages? The figures cited above indicate that each language contains at least some subordination. The distinction between dependent and independent clauses is not always an obvious one, however.

2. The Subordination Continuum

Two factors that complicate the identification of subordination are the gradual nature of two processes: grammaticalization and lexicalization.

Even in sequences of overtly independent clauses, several types of markers can indicate special relationships among the clauses. One of these involves tense and aspect. In Mohawk, Gunwinggu, and Kathlamet, all verbs are finite. Mohawk has three tense markers: past, present, and indefinite. The indefinite prefix a- is used for punctual events occurring at an unspecified time, and is translated variously as 'might/could/should/would'.

Mohawk (Annette Jacobs, p.c.)

- (19). Ahoié:nawa'se'.
 'He might/could/should/would help him.'

This tense frequently appears on verbs translated into English complement clauses containing infinitives.

Mohawk (Annette Jacobs, p.c.)

- (20). Wahori'wanón:tonhse' ne rón:kwe ahoié:nawa'se'
 he asked him the man he would help him
 tahaià:ia'ke'.
 he would cross there

'He asked the man to help him get across.'

The use of the indefinite tense suggests that the occurrence of those events is contingent upon some other event or condition.

Differences in tense and aspect among verbs in a sequence can also suggest that the verbs are fulfilling different roles. Both verbs in the Gunwinggu sequence below are finite, but the first is past continuous, while the second is present.

Gunwinggu (Oates 1964:115)

- (21). ... yimi gabun giŋa.
 she thought he is killing crocodile
 '... she was thinking he was killing the crocodile.'

In the Kathlamet sequence below, the difference in aspect between the two verbs suggests an overlapping of the events. Note the relative clause translation.

Kathlamet (Boas 1901:89)

(22). Q:oa:p itcítòx taXi tqá:to:te:nikc,
near he came them those boys

aqá tá:nki itkLiló:qcqala.
then something they were throwing it with spears

'He came near boys who were throwing spears at something.'

When all verbs can stand alone as independent clauses, as above, a contrast in tense or aspect would not seem to constitute a formal marker of grammatical subordination in itself. It does seem to suggest some semantic dependency between clauses, however. Furthermore, intonation patterns suggest some link between clauses as well. (In the Mohawk examples, commas were used where speakers paused without a drop in pitch, and periods were used where they came to a full stop with a definite pitch drop. Presumably the same conventions were followed in the Gunwinggu and Kathlamet transcriptions.) These intonation patterns, along with the translations supplied by the speakers, would indicate at least some type of conceptual link between clauses.

A second device for indicating some relationship among sentences is the use of demonstrative and deictic particles as an argument of one clause to refer to another whole clause. In the Mohawk sequence below, the particle kí: 'this' in the first clause refers to the second clause.

Mohawk (Lazore p.c.)

(23). Ó:nen kwah ken' náhe' kiotáhsawen kí:,
now just bit ago it has begun this

onkwehón:we ronhténkie's.
real person they are leaving

'Not too long ago people began to leave (the reserve).'

In the following Gunwinggu sequence, the particle gunu 'that' refers to the preceding clause.

Gunwinggu (Berndt and Berndt 1951:37)

(24). ... dja mi:n bu nadman gadbere gunwo:g
and not in regard to ourselves our language

garibi'bi:mbun, gunu gari'wagwan.
we write that we don't know

'But we don't know at all how to write our own language.'

Sequences translated with relative clauses can also include demonstratives.

Mohawk (Horne p.c.)

(25). Wísk na'thatí:nerenke' ne kaién:kwire', né
 five so they bound the arrow this

ké:n:ton tsi ó:nen wísk nihononhwentsá:ke
 it means so then five so they tribes number

ia'thóntieste'.
 they were joined

'They tied together five arrows, which symbolized the union of the five tribes.'

One clause may contain a temporal deictic referring to the time of an adjacent clause. The Mohawk particle ó:nen, the Gunwinggu galug, and the Kathlamet aqá all mean 'at this time/at that time/now/then'.

Mohawk (Horne p.c.)

(26). Ronaterí:iohkwe' ó:nen ronwatishennionhátié',
 they were fighting at this time they were losing

thontaiawénhstsi' ken' nahatí:iere',
 suddenly just they noticed

Tharonhiawá:kon wahoké:tohte'.
 he holds the heavens he appeared

'Tharonhiawakon appeared in one of their battles when it looked like they were going to be defeated.'

Gunwinggu (Oates 1964:98)

(27). ... narbeg buni'buni. Galug gumegbe
 porcupine he was killing then in that place

mangun naŋ ...
 sugar bag he saw

'He was killing porcupines when he saw a sugar bag.'

Kathlamet (Boas 1901:65)

(28). Aqa ió:maqt yaXi iqcxé:Lau. Ictó:pa.
 then it died that monster they two went out
 'When the monster was dead, they went out.'

Deictic or demonstrative particles appear in other adverbial sequences, such as the locatives below.

Mohawk (Sharro p.c.)

(29). Iahshakoiat'énhawe tsi iontatenhotónhkhwa'
there he took them to one door closes with it

wahonwatinhó:ton, thóh ki' iehonanón:werehkwe.
they door closed on them there just there they slept

'He took them all to jail where they spent the night.'

Gunwinggu (Oates 1964:93)

(30). Galug wam bebmen gure ma:m benenarinj.
then he went he came to devil they two saw e.o.

Gumegbe gu:nj mimbigurmen.
in that place kangaroo alive he left

'So he went to that place and he and the devil each saw the other. The man left a live kangaroo in the spot where he was.'

Is this subordination? The intonation patterns of examples 23 - 30 suggest that the clauses might indeed be independent. Other sequences containing deictics like those above, however, are both pronounced and translated as single (complex) sentences. In Mohawk, such constructions are translated into a wide variety of English subordinate clauses.

Complementation

Mohawk (Annette Jacobs p.c.)

(31). Wà:rehre' ne rón:kwe óksa'k ki' ná:'a
he thought the he-person quickly supposedly

ne ienhará'then ...
that he will climb up there

'Soon after, the man decided to go on up.'

Relativization

Mohawk (Natawe p.c.)

(32). Ó:nen shaià:ta ne rotahséhton wa'thoén:rehte',
now one male body this he is hiding he called
'Now one of the men hiding spoke loudly.'

Temporal adverbial

Mohawk (Annette Jacobs p.c.)

(34). Kwáh ki' iá:ken, ó:nen thó:ha
even just it is said at this time almost

ahshakohóntera'ne' ó:nen wa'onhsá:kaienhte'.
 would he catch her at this time she sounded her mouth

'He was right behind her when she gave a loud yell.'

Conditional

Mohawk (Hill p.c.)

(35). On:was ná:'a ensakarè:wahte tóka'
 possibly you will get hurt maybe

tenhshra'kwénhtara'ne.
 you will fall

'You could get hurt if you fall.'

In Gunwinggu, such constructions are often translated into English relative clauses, both nonrestrictive and restrictive.

Relativization

Gunwinggu (Oates 1964:92)

(36). dja djorggun gugbalan'mey yibalirdoreṅ
 and possum (he) body dropped big dilly bag with

nawu gugoydj gugṅorga:ni.
 this on head he body was carrying

'and he dropped the possum in the dilly bag which he was carrying on his head'.

Gunwinggu (Oates 1964:96)

(37). Galug biriweyn nawu guṛed birini bininj
 then they many those home they sit men

mole'molenj wuḍwuḍ biriyawam.
 women children they looked for him

'Then many of the men, women, and children in camp looked for him.'

Such constructions are rarer in Kathlamet, but they do exist.

Relativization

Kathlamet (Boas 1901:162)

(38). Qá:mta ió:ya tau igiXatkjóá:mam?
 where he went this one he came home

'Where went he who came home?'

Locative adverbial

Kathlamet (Boas 1901:60)

(39). Lgá:pElatikc tÉnEmckc oxwikjé:wula
 many women they pick berries

go:pá ictó:ya.
there they two went

'They went to the place where the women are picking berries.'

Constructions like those above do not contain formal dependent clauses. Any of the clauses could stand alone grammatically. The intonation in the Mohawk and the punctuation supplied by those transcribing Gunwinggu and Kathlamet, however, along with the translations, suggest that such constructions have become grammaticalized as markers of subordination, given appropriate intonation. (Compare the use of English that.)

Yet the role of intonation in marking subordination is not as unambiguous as one might wish. These languages share another stylistic characteristic. Speakers often combine overtly independent clauses into single intonation groups that are translated into English compound sentences.

Mohawk (Frank Jacobs, Jr. p.c.)

(40). Orhon'kè:ne wahá:ie' iahatke'tó:ten' tsi
in morning he woke up he looked out at

tekatsiserá:ton wahonehrá:ko' ...
window it surprised him

'He woke up in the morning and looked out of the window and to his surprise (saw the wagon ...)'

Mohawk (Montour p.c.)

(41). Iah tha'tehonatotá:ton ratitakhenóntie's
not did they quiet down they run around

thihshakotiié:ron ne akokstén:ha.
they tease her the she is old

'The children kept right on making a lot of noise and running, teasing the old lady.'

Gunwinggu (Oates 1964:105)

(42). Benegumangan balwam
they two body fell he went close

benbeneguḷbalibmen. Galug nuye yibalir
he them two blood sucked then his dilly-bag

benebenegugdagendoy benbenegugnormay,
he them two put he them two carried on shoulders,

wam bebmen guře guřed nuye.
he went he came up to camp his

'They both fell down together. He came close to them and sucked their blood. Then he put them in his dilly-bag and carried them on his shoulder to his camp.'

Kathlamet (Boas 1901:220)

(43). Itgí:ya é:maLîXpa tgúnat itkto:pjé:yaLx; Lná:qo:n
they went to the bay salmon they caught sturgeon

iqLo:pjé:yaLX. Aqa igolXuiLxÉlEmtck têlXam.
they caught then they ate the people

A:, aqa igó:Xuik^acEm; iqáto:kcEm tgúnat;
ah then they dried fish; they dried them the salmon

iqáLo:kcEm Lná:qo:n.
they dried them the sturgeon

'They went to the bay and caught spring salmon. They caught sturgeon and they ate. Then they dried the salmon and the sturgeon.'

Such conjunction is of course always motivated, as when events occur simultaneously or in rapid succession, or when clauses are in a type of appositive relation, each enlarging on the last.

Intonation can thus indicate that adjoining clauses are considered constituents of the same sentence. It is not an indicator of the difference between coordination and subordination, however. Perhaps such an indicator could not in fact exist. Annette Jacobs, an excellent speaker of both Mohawk and English, commented after much reflection that although sentences like (34) above would indeed be used in contexts where English speakers would use when clauses, it is not completely clear whether the structures are syntactically equivalent. It is not always obvious whether the Mohawk corresponds more closely to 'when X then Y', or to 'then X then Y'.

A second factor that complicates the identification of subordination is the gradual nature of lexicalization. Mohawk, for example, has a highly productive verbal morphology. Normal discourse consists predominantly of morphological verbs, since verbs can function not only as clauses and predicates, but also as nominals, with no modification in form. Such nominals are often verbal descriptions of their referents, like ra'swà:tha' '(he) extinguishes'/'fireman'. A typical way of modifying a noun is to incorporate the noun stem into a descriptive verb. The result is, again, a morphological verb which functions syntactically as a nominal, like kanonhsarà:ken '(a/the) house is white' = 'white house'. In some cases, the only idiomatic way to use a noun is to incorporate it. If nouns for large, immovable objects, such as houses, are not incorporated into some other verb, they are incorporated into a verb specifying their position. Speakers thus do not normally use the simple noun

kanónhsa 'house', although it is morphologically well formed. Instead, they incorporate it into a verb, either a descriptive one like that above, or the verb -ote 'stand', yielding kanónhsote 'house stands' = '(standing) house'. Although such words as ron'swā:tha, kanonhsarà:ken, and kanónhsote, are morphological verbs, they are normally used as nominals and have been lexicalized with a primarily nominal meaning. Asked to translate ra'swā:tha, Mohawk speakers would normally reply 'fireman', not 'he extinguishes.'

Now as noted above, subordination in these languages is often marked formally by particles which normally precede nominals, such as determiners and prepositions. When they precede a clause, they indicate that the clause is functioning as a nominal, and is therefore subordinate. In (44) below, the article ne 'the/that' precedes a morphological noun.

Mohawk (Annette Jacobs p.c.)

(44). Wahontkennísa' ne ronón:kwe ...
 they met the men
 'The men had a meeting.'

In (45), the ne precedes a clause functioning as a complement (sentential object).

Mohawk (Annette Jacobs p.c.)

(45). ... teionatonhwentsó:ni ne aontakontiráthen
 they want (it) the they would climb up here

 keń:'en kaná:takon akóntien.
 here village in they would stay

' ... they are trying to climb up the riverside to come into our village.'

Now in the sentence below, the article precedes a morphological verb functioning as the subject. This verb, however, rahtahkón:nis 'he makes shoes', has become lexicalized in modern Mohawk as the normal term for 'shoemaker'. When asked to translate the word into English, Mohawk speakers would normally say 'shoemaker', not 'he makes shoes.'

Mohawk (Phillips p.c.)

(46). Ó:nen ki' ne rahtahkón:nis tahoná:khwe'.
 now just the he shoes makes he got mad.
 'At this point the shoemaker became angry.'

Is the phrase ne rahtahkón:nis 'the (one) he-shoes-makes' > 'the shoemaker' subordinate or not?

The Gunwinggu particle nawu 'this/that/these/those' presents the same dilemma. Before a noun, it functions as a determiner.

Gunwinggu (Berndt and Berndt 1951:35)

(47). wain' ŋadman birigjal'bal'me nawu gundolŋ
 so ourselves they just shut off that smoke (noun)

gadbere.
 (from) us

'As for us, they just stopped our tobacco.'

Before a clause, however, it signals that what follows is functioning as a nominal argument of some other clause. The whole is usually translated into an English relative clause.

Gunwinggu (Berndt and Berndt 1951:41)

(48). Galug bindi'mane'jime, nawu gondan'gunu gunred
 then they said to them those here country

biri'jingi'ne, " ...
 they lived,

'Then those who lived here, in this country, said to them:'

Now consider the sentence below. The particle nawu precedes a morphological verb.

Gunwinggu (Berndt and Berndt 1951:34-35)

(49). ... gandijigar'garmere gadbere ŋa:d nawu
 they keep it for us ours us these

garigugbu'lere.
 our bodies are dark

'they look after our (language) for us Aborigines.'

Does the term garigugbu'lere constitute a subordinate clause, 'we whose bodies are dark', since it is morphologically a verb, or does it constitute a syntactically simplex nominal, since it has presumably been lexicalized with the meaning 'Aboriginal'?

Adverbial particles can present the same problem. The Gunwinggu particle bu means 'in regard to', 'as to', 'in relation to' when used before a noun. It can carry a meaning closer to 'in order to', 'when', or 'if' before a clause, however. The particle gure functions like a preposition before a noun, meaning 'at', 'to', 'toward', 'in', etc. Before a clause, it takes on the meaning 'where'. If such particles precede a morphological verb which has become lexicalized with a nominal meaning, should the result be considered syntactic subordination or not? The question is further complicated by the fact that morphological constructions do not become lexicalized all at once, so that lexicalization is necessarily a matter of degree.

3. Factors Affecting the Propensity to Subordinate

Suppose that all of the demonstrative and deictic particles described above have in fact become fully grammaticalized as subordinators. Suppose, furthermore, that all morphological verbs retain their syntactic status as subordinate clauses, even if they have been lexicalized with nominal meanings. Does the propensity to subordinate even out across languages? In fact, it does not. The proportions of subordination cited earlier for Mohawk, Gunwinggu, and Kathlamet included all such constructions with appropriate intonation as subordinate, even though those clauses could usually stand alone as independent sentences, given alternate intonation. Speakers apparently do in fact prefer to juxtapose clauses in these languages rather than to mark their syntactic relations more formally. Why might this be?

One obvious explanation for their striking contrast with English might be sought in a typological characteristic: their polysynthesis. In fact, some of the functions accomplished in English by syntactic subordination are accomplished morphologically in these languages by means of such affixes as inchoatives, inceptives, causatives, instrumentals, desideratives, purposives, etc., or by noun incorporation, as below.

Gunwinggu (Oates 1964:106)

(50). bi-gere-madbu-ni
 he/her-cooked-wait-past continuous
 'he [a cannibal] waited for her to cook'

Kathlamet (Boas 1911:670)

(51). i-L-x-e-tE-lótcx-am
 he-indef-refl-him-coming-look on-go to
 'he came to see [the dances]'

Such morphological devices fulfill a part of the function of subordination in permitting speakers to combine several ideas into a single unit: in the case of affixation and compounding, a word, in the case of subordination, a sentence.

A second function of subordination is to put ideas into relief: it provides a mechanism for backgrounding clauses within a larger, cohesive whole. The obligatory pronominal affixes in Mohawk, Gunwinggu, and Kathlamet verbs provide an alternative mechanism for such backgrounding. Since case relations within clauses are clear from the pronominal affixes, word order is not necessary for this function. Instead, it can be exploited to indicate the relative importance of the various elements within a discourse. In languages of this type, the most significant information is typically placed near the beginning of sentences, and less important information, that which is already known or merely incidental, appears near the end.

Although polysynthesis is a significant factor in the propensity to subordinate, a brief survey of other polysynthetic

languages indicates that this characteristic alone is not sufficient to account for the differences noted above. Tlingit, a highly polysynthetic Na-Dene language spoken in southeastern Alaska, shows a proportion of 28% overtly subordinate clauses in the texts recorded by Swanton (1909). This proportion is not as high as that recorded for English, but it is considerably higher than those for Mohawk, Gunwinggu, and Kathlamet. The Tlingit case indicates that it is not only the fact but the nature of the morphological complexity of a language that affects the amount of overt subordination in discourse. Tlingit has a set of suffixes that mark subordination overtly within the verb. Its high degree of polysynthesis reflects not only the morphologization of pronominal elements, tense and aspect distinctions, and various adverbial modifiers, but also of various nominalizers, relativizers, and adverbial subordinators.

Another aspect of complex morphology that can result in an increase rather than a decrease in overt subordination is the productivity discussed above. Although the proportion of overt subordination in Mohawk texts is often as low as 7%, it can vary considerably from speaker to speaker and topic to topic. Some of the highest proportions of subordination can be found in the speech of the most admired Mohawk speakers. Especially skillful speakers are characterized by a creative use of language, and in Mohawk, where the verbal morphology is particularly rich and productive, such skill generally involves the invention of new verbs to describe and refer to entities and events. In general, the more skillful the speaker, the more verbs will be present. This preponderance of verbs engenders a corresponding increase in the overt marking of subordination, both obligatory and optional. In some cases, such as locations, the nominal use of a morphological verb requires formal subordination. In addition, extremely long series of morphological verbs can be difficult to interpret syntactically, so that optional syntactic markers appear more often. The relation between morphological structure and overt subordination is, therefore, a complex one. While certain aspects of polysynthesis, such as obligatory pronominal affixes and the morphologization of concepts like cause, intent, inception, etc., can reduce the amount of overt subordination, others, like the morphologization of syntactic markers and the productivity of verbal morphology, can increase it.

Morphological characteristics still do not fully account for the contrasting frequencies of overt subordination noted above, however. Mohawk, Gunwinggu, and Kathlamet speakers combine formally independent clauses in tonationally more frequently than do English speakers. Are these languages simply more primitive stylistically than English? This is clearly not the case. All three have rich oral traditions, as evidenced by numerous other aspects of the textual material available. All of the texts show skillful manipulation of various intricate stylistic devices throughout. The Mohawk have had a well documented reputation for oratorical skill ever since their first contact with Europeans

over three and a half centuries ago, and oral virtuosity of all kinds is still highly valued and cultivated among modern Mohawk speakers. The linguistic traditions of all three groups are uniquely oral, however, and not written. The Kathlamet speaker who worked with Boas did not write at all. He did not even know a language with a written tradition, although he was at least tridialectal in Kathlamet, (Lower) Chinook, and Chinook jargon. The Gunwinggu speakers who worked with the Berndts and with Oates did not write Gunwinggu, although some had learned English and apparently wrote it extremely haltingly. The Mohawk speakers cited above have not written their language until very recently, and now do so only on rare occasions in language classes. They are all quite literate in English, however. These facts suggest a second factor in the differences between proportions of subordination in Kathlamet, Gunwinggu, Mohawk, on one side, and English on the other.

Chafe found that while the proportion of dependent idea units in English conversation was 34%, the proportion of dependent clauses in letters was 46% (p.c.). In a study of Swahili style, Joan Maw (1974) noted that the proportion of dependent clauses in her sample of oral texts was about 25%, while that in her sample of written texts was 41%. Recall that the lowest proportion of dependent clauses among the languages discussed above was in the Kathlamet texts, provided by a speaker who neither wrote nor knew a language with a literary tradition. The second lowest proportion was found in the Gunwinggu texts, provided by speakers who did not write much but did know some English. As noted above, Mohawk texts show a striking variation in their proportions of dependent clauses. Some narratives transcribed from tape recordings show as little as 7% subordination, while texts written by Mohawk speakers can show a proportion as high as 30! These speakers normally write in English when they write, and a number of stylistic elements of written English sometimes creep into their written Mohawk, such as SVO word order, reduced use of evidential particles, and increased use of overt noun phrases. It is not impossible that part of the increased proportion of overtly subordinate clauses might be attributable to the written medium.

Why should subordination increase with a literary tradition? Several explanations are possible. Most writers write more slowly than speakers speak. Writers have time to construct sentences that are fairly elaborate syntactically, and they can move back and forth over a sentence, adjusting the parts at will into a polished whole. Speakers are restricted to a single pass. In addition, most readers read considerably faster than most speakers speak, so that it is easier for a reader to keep track of the various parts of a long sentence woven into an elaborate whole, than for a hearer (cf. Chafe 1982). These differences in speed may foster the development of complex syntactic structures in written language which can eventually slip over into spoken language to some extent, especially

carefully planned speech.

The written medium may also engender a special need for subordination. Various degrees of bonding between clauses can be easily conveyed in oral narrative by rhythm and intonation. Modulation of volume, pitch, and speed, can put ideas into relief, backgrounding some clauses and foregrounding others. In contrast, writers have less control over the reception of their messages. Punctuation can reflect differences between pauses and full stops, but intricate syntax may be necessary to convey the relative importance of the ideas presented. Perhaps the lower proportions of subordination in the Mohawk, Gunwinggu, and Kathlamet texts do not reflect stylistic poverty at all. It may simply be that literary traditions have led to the development of tools meant to compensate for the loss of mechanisms inherent in skillful oratory.

Subordination is thus not a universal constant. Languages and speakers vary considerably in the exploitation of this syntactic device. The exact nature of the device is a fuzzy one, more distinctive in some languages than in others. The causes of the variation and fuzziness are, furthermore, complex, in part a function of language-internal factors, such as polysynthesis, in part due to language-external factors, such as a literary tradition.

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