This article examines several grammatical developments that have received relatively little attention, but that may be more pervasive than previously recognized. They involve the functional extension of markers of grammatical dependency from sentence-level syntax into larger discourse and pragmatic domains. Such developments are first illustrated with material from Navajo and Central Alaskan Yup’ik, then surveyed more briefly in several other unrelated languages. In some cases, secondary effects of such changes can reshape basic clause structure. An awareness of these processes can accordingly aid in understanding certain recurring but hitherto unexplained arrays of basic morphological and syntactic patterns, exemplified here with cases of homophonous grammatical markers and of ergative/accusative splits. Like developments described by Gildea (1997, 1998) and Evans (2007), they involve the use of dependent clauses as independent sentences, but the processes described here differ from those in both the mechanisms at work and their results.*

Progress continues to be made in our understanding of the ways in which grammatical structures can develop over time. Considerable attention has been focused on processes by which larger, looser patterns are crystallized into tighter, more compact ones. Frequently used discourse patterns, for example, such as a particular constituent order, can become routinized and rigidified in syntactic structure. Elements of recurring phrasal collocations can become fused and reduced in morphological structure. Not all grammatical development is reductive, however. Here a set of grammatical developments is examined that have resulted in increases in structural scope from syntax to discourse and pragmatics. Developments of this type have often gone unnoticed, perhaps in part because of the traditional focus on the sentence as the maximal domain of grammatical structure.

Such developments are first examined in Navajo, an Athabaskan language of the American Southwest. These are then compared with developments in Central Alaskan Yup’ik, an Eskimoan language of Southwestern Alaska, which shows intriguing parallels. Similar patterns in some other genetically and areally unrelated languages are briefly described, and various hypotheses concerning the processes leading to the patterns are considered. Finally, it is shown that the effects of diachronic changes of this type can extend beyond discourse patterns, ultimately turning back to reshape basic clause structure. In the end, an awareness of the existence of such changes and their effects can provide explanations of certain seemingly arbitrary but recurring arrays of structural patterns.

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1. **NAVAJO**. A simple sentence in Navajo can consist of a verb alone (with pronominal reference to its arguments) as in 1a, or a verb with lexical nominals, postpositional phrases, other adverbials, and/or particles, as in 1b.1

(1) Some basic Navajo clauses (Dolly Hermes Soule)

a. Hołdah’adiilwod.
   ho-ł-dah-'a-di-yi-l-wod
   ‘He rode off.’ (‘Something ran away with him.’)

b. A´a´doo, n´t’e˛´e˛´’ shı˛´ı˛´ e´i shizhe´e´ shı˛´ı˛´ nle´i,
   and then probably that my father probably there

   Fort Wingate    shaajinı´ı´-ya    nidéę’
   Fort Wingate    at    1SG-to-4.SUBJ-N.PRF-one.go.PRF then

   Damógo.
   Sunday = ADVR
   Damóo = go

   ‘And my father had probably gone to Fort Wingate to visit me on Sunday.’

Navajo sentences can contain arguments or modifiers that are themselves clauses. These clauses are syntactically subordinate, in that they are embedded inside higher matrix clauses, and dependent, in that they do not constitute independent sentences on their own. They are identified by enclitics of two basic types. Those of the first type are nominalizers that are also used to form relative and complement clauses. There are four: =ı, =ii, =ıgıı, and =yeę (which also appears as =eę or =a). An example of this type is in the second line in 2 below, where the enclitic =a ‘the former one who’ marks a relative clause.

(2) Navajo relative clause (Dolly Hermes Soule)

T’aá n´t’e´e’ hastiin,
   and then man

   bilasána níįjíįįháą éí,
   apple repeatedly-4.SUBJ-gather.IMPRF that

   bilasána ní-ji-láhá =a éí
   apple the aforementioned one picking that

   =aá ‘the former one who’


Unless otherwise indicated, examples are from personal communication with native speakers, whose names are given with each example.
The second type of dependent clause marker is the enclitic = go. (In fast speech this marker is lenited to = o, and under the influence of a neighboring nasal nasalized to = o. In written text the invariant spelling (go) is often used for all forms.) This enclitic marks adverbial clauses and some complement clauses. The first line of 3 shows an adverbial clause ‘when everybody was in bed’.

(3) Navajo adverbial clause
Áko jineezjeé’
Ako ji-nee-s-jeé’
so 4-SUBJ=THEMATIC-4-PREF=multiple.recline.PREF = ADV=ZK maybe
And then apparently [when everybody was in bed],
da’jihxaxazh.
da’ji-l-hbaazh
deZ1-something-4-SUBJ-CL-sleep.PREF
they all went to sleep.’

1.1. Extension. In Navajo translations of English sentences, the two markers of syntactic dependency behave just as would be expected: they identify subordinate clauses in complex sentences. Unscripted speech can bring surprises, however. In the course of a conversation, Navajo speaker Dolly Hermes Soule recounted the anecdote in 4 below about an event from her childhood: unaware of the presence of a guest in the hogan, she spoke when she should have been silent. To make matters worse, she inadvertently called out the name of the visitor, highly inappropriate behavior. The name, Hont’ah, is also a word meaning ‘corner’. Each line in 4 represents a syntactic clause: one full verb with pronominal reference to arguments, optionally accompanied by lexical nominals, demonstratives, postpositional phrases, adverbials, and/or various particles. Clauses marked with the = go enclitic (= go, = o, or = p) are indented in both the original Navajo and the free translation. The phrase-by-phrase translation was provided by the speaker.

(4) Navajo anecdote Hont’ah
a. Háddáá’é’ya, hastiin lée’ nihaaniiyááh akwe’ éé. = go
b. haashtaah t’a ho niht’óógo. = go
He’s our relative somehow.

c. Éí nihaaniiyááh néí. = go
He came to our house,
d. hoghaan góó’é ée sidín. = go
he’s sitting in the hogan.
e. Éí shíí, hataal dants’í baana’aldeehó. = go
Probably something to do with the preparation for the sing.
f. Āko. Ha’at’ísh ya. ‘Ndii’ah?’
So. “Go and get’ something or other,
g. shí’doo’niiídó. = go
I was told.
h. Háadi là si’á
  Where it was sitting
  = go

i. shi’ido’ niidí
  I was told.

j. Akóne’ yáh eeshwod ndééj
  I ran off into the hogan.

k. ‘Ndíi hont’ahdi si’á
   ‘It’s sitting way back there in the corner’
  = go

l. dishní ndééj
  I was saying.

m. T’ah éí ádidi sidé léí
  Hont’ah was still sitting back there.

n. t’óó baayáníndíí
  I got so embarrassed.

o. Ch’ílnááshwood.
  I ran back out.

p. T’óó hálítgo’bííjí’ a’ni’iíldióóh
  We two (my sister and I) just laughed and laughed.

(In her later free English translation, the speaker used standard constructions: ‘He was related to us somehow’, ‘He was in the hogan’, ‘We were having some kind of ceremony’.)

In this anecdote, as elsewhere in spontaneous Navajo speech, = go clauses are surprisingly frequent. This anecdote contains as many = go clauses as unmarked clauses: eight of each. This extensive use of syntactic dependency markers does not reflect sloppy performance or poor planning. It is completely acceptable to speakers during later rehearing and careful collaborative work on transcription and translation. Indeed, a wider examination of the contexts in which = go appears in spontaneous Navajo speech shows that its occurrence is pervasive. In a sample consisting of stretches of unscripted speech by Mrs. Soulé, recorded on various occasions, 37.8% of the clauses (285 of 754) were marked with = go.

The use of = go is also highly systematic. It not only marks the subordinate relations of adverbial clauses within sentences; it also specifies relations of sentences to larger stretches of discourse. Its discourse function can be seen even in the short Hont’ah anecdote. The formally independent (unmarked) sentences advance the storyline: ‘I was told to get something’, ‘I was told where it was’, ‘I ran off into the hogan for it’, ‘I said, ‘It’s way back there in the corner’’, ‘Hont’ah was still sitting back there’, ‘I ran back out’, ‘My sister and I laughed’. The indented = go sentences provide background, incidental information, explanation, and emotional evaluation: ‘One day a man came to visit us here’, ‘He was probably related to us in some way’, ‘He came to our house’, ‘He was sitting inside the hogan’, ‘People were probably preparing for the sing’, ‘I was so embarrassed’. In terms of the models of narrative structure outlined by Labov and Waletzky (1967), Labov (1972), and Chafe (1994), the = go-marked sentences provide orientation and evaluation, while the unmarked independent sentences build the tale through the complication and climax or resolution.

Most of the unmarked sentences in the Hont’ah anecdote could be characterized as what Labov and Waletzky term ‘narrative clauses’: they ‘maintain the strict temporal sequence that is the defining characteristic of narrative’ (1967:22). Hopper (1979:213) defines such clauses as ‘foreground’: ‘the language of the actual storyline . . . the parts
THE EXTENSION OF DEPENDENCY BEYOND THE SENTENCE

of the narrative which relate events belonging to the skeletal structure of the discourse’, contrasting them with what he terms ‘background’: ‘the language of supportive material which does not itself narrate the main events’. Correlations have been observed in a number of languages between the foreground/background distinction and perfective/imperfective aspect. Foreground material tends to be presented in the perfective, and background in the imperfective (Forsyth 1970, Hopper 1979, 1982). Navajo, like other Athabaskan languages, contains an unusually elaborate set of aspectual distinctions, expressed through combinations of prefixes and stem shapes (Kari 1973, Young & Morgan 1987, Young et al. 1992, Midgette 1995, 1996, Smith 1997). Perfective and imperfective aspect are clearly marked, but interestingly, the aspectual marking does not correlate cleanly with the \( = \) dependency marking. The two serve slightly different functions. Sometimes discrete events set the stage, as in ‘One day a man came to visit us here’ in 4. Their status as single, complete events is reflected in perfective aspect marking, but their function as background, orienting material is reflected in \( = \) dependency marking. The aspectual marking thus does not correlate perfectly with aspect, though both are exploited by speakers to structure narrative.

The sentences in the Hont’ah anecdote that describe acts of speaking provide an interesting contrast. In the first two instances, ‘[I was told,] “Go and get it!”’ and ‘[I was told] where it was’, the acts of speaking were marked grammatically as dependent and subordinate. It was the messages that were important at those points, that moved the story along. In the third instance, however, ‘I was saying “It’s way back there in the corner”’, the act of speaking was independent, unmarked by \( = \). This act of speaking was the climax of the story.

Particularly since we are dealing with spoken language, where there is no tradition of punctuation, we might ask whether these \( = \)-marked clauses are truly sentences in their own right, rather than subordinate clausal constituents of a larger complex sentence. The distinction between sequences of clauses within a sentence on the one hand, and sequences of separate sentences on the other, can indeed be fuzzy. Lines a and b of example 4, for example, could be viewed either as separate sentences or as the equivalent of English clauses linked by a semicolon: ‘One day a man came to visit us here; he was related to us in some way’. Lines c and d could be compared to an English compound sentence: ‘He came to our house and was sitting inside the hogan’.

The separateness of many Navajo \( = \)-marked clauses is reflected in several ways. One is prosody. The Navajo anecdote in 4 above has been punctuated to represent the prosody of the original performance. A comma indicates a slight final rise in pitch, and a period indicates a final terminal contour, that is, a full fall in pitch (with contrastive tone taken into account). Lines b, d, e, g, and i were all marked with \( = \), but each ended with period intonation, the intonation characteristic of clearly independent sentences not marked with \( = \). In each case, the following sentence began with a pitch reset. These features can be seen in the fundamental frequency display of lines a–d in Figure 1. As noted by Bolinger (1984, 1989) and many others, prosody and syntax are not necessarily isomorphic, though they can coincide to a great extent. Lines b, d, and e, punctuated with periods, were each followed by a substantial pause (1.041, 1.068, and 0.751 seconds respectively). These pauses are comparable to the 1.021 seconds after Áko ‘so’, also followed by period intonation, which closed off the scene-setting portion of the narrative. But pausing occurs for a variety of other reasons as well, such as time for word
searches. Conversely, pauses are often omitted between clearly independent sentences as a rhetorical device for heightening drama in narrative. As the Hont’ah narrative progressed, there was an acceleration in tempo and general reduction in pausing.

Further evidence of the separateness of some =go-marked clauses comes from translations provided by bilingual speakers, as above. The most important evidence, however, comes from the larger structures in which these =go-marked sentences participate. In traditional views of syntax, syntactically subordinate clauses are assumed to be dependent on an identifiable matrix clause. In connected speech in Navajo, there is often no specific matrix clause that the =go-marked clause is subordinate to. The Hont’ah anecdote, like most Navajo narratives, opens with a cluster of =go sentences, in keeping with their scene-setting function. There is no potential matrix clause before them, and they are certainly not subordinate to the sentence that follows them: ‘Go get something’. They are dependent in the sense that their =go marking indicates a relationship to the larger context. To the extent that they provide information off the main event line of narrative, this relationship could be characterized as one of subordination.

1.2. THE DIRECTION OF DEVELOPMENT. We know that grammatical structures often develop through the routinization and reduction of larger patterns of expression to smaller ones (von der Gabelentz 1891, Meillet 1912, and many others since). Frequently recurring phrasal collocations can, over time, be reduced to morphologically complex words, and frequent discourse patterns can be routinized and solidified into syntactic structures. There is evidence, however, that the scope of the Navajo subordination marker developed in the opposite direction, through the extension of the construction from syntax into discourse. The next three sections first describe the lexical and syntactic uses of =go within Navajo, then compare lexical and syntactic uses of cognate forms in other Athabaskan languages, and finally investigate their extension into discourse in representative languages from all three branches of the family.

LEXICAL AND SYNTACTIC USES OF =GO IN NAVAO. In a study of the development of subordinators in Tibeto-Burman languages, Genetti draws two conclusions:

The first is that the frequency of syncretism between case postpositions and clausal subordinators is great enough to imply a common trend of grammatical extension. The second is that the extension follows regular patterns, such that postpositions with a given semantic value develop into a consistent set of subordinators. (1991:228–29)

The first regular pattern she lists is the development of locative postpositions into adverbial clause markers meaning ‘when/while/after’ and ‘if/although’. In their World
Heine and Kuteva note that 'locative markers appear to be one of the most common sources for clause subordinators' (2002:205). They further observe that the direction of change is always the same: There is appropriate evidence showing that adpositions or case markers may give rise to adverbal clause subordinators, while it is hard to find examples of an opposite directionality, that is, where a clause subordinator has developed into a preposition or postposition (2007:224).

The development from locative adposition to adverbial subordinator shows a property typical of grammatical change in general: a shift from more concrete to more abstract meaning. Heine and Kuteva list common structural properties of subordinate clause structures that have developed via extension. Their first property is 'The marker of subordination resembles a grammatical form associated with noun phrase structure, such as a marker of case, gender, definiteness, or an adposition' (2007:216). The modern Navajo enclitic =go appears pervasively in adverbs derived from a variety of lexical classes and phrases. In example 5 it is attached to a noun, in 6 to a verb, in 7 to a numeral, and in 8 to a postpositional phrase.

(5) Navajo adverbializer =go on noun
   a. ahbı́nı́ 'morning'
      ahbı́nı́ =go 'in the morning'
   b. Náájë́ ahbı́nì́=go éél
      then morning =advzr that
      'Then in the morning, chíínílkai,
      chíéę'íítíí-kai out.horizontally-N.PRF-lpl.subj-multiple go prf
      'we all went outside.'

(6) Navajo adverbializer =go on verb
   a. nizhóní =go 'it is beautiful'
      nizhóní =go 'beautifully'
      t'oó áátí
      t'oó áátí =ni-nizhóní =go
      just there =at n.rex.be.beautiful =advzr
      just there beautifully
      da'joolzhidhizh.
      da'-j-oo-l-zhiizh
distr-occur-4.subj-1p.fut-cl.-dance.prf
      people dance
      'They just dance beautifully over there.'

(7) Navajo adverbializer =go on numeral
   a. táá
      táá == a 'by three, as three, being three'
   b. Aaadóó
      n't'éé ashíi=ké =yázhí
      there =from then boy =pl =little
      from there then little boys
      'Then from there some little boys,'
taa-go  aadę’ yikahla

three go by three they were walking

‘three of them, came along.’

(8) Navajo adverbializer = go on postpositional phrase (Dolly Hermes Soule´)

a. dził biná = ‘around the mountain’

b. Akįya . . . él niTli dził

(9) Navajo adverbial clause with causative interpretation (Dolly Hermes Soule´)

Háahghooshį ayío likano

really very it be sweet

‘[If it being very sweet,] he started to eat it.’

(10) Navajo conditional interpretation (Dolly Hermes Soule´)

Shibéeso  t’óó ayío,

my money just being much

‘[If I had a lot of money]

ako éi hooghan sh’aadoolithil

then that house it will be made for me

I would have a house built for me.’
Temporal association can also be interpreted as manner.

(11) Navajo manner adverbial clause (Dolly Hermes Soule´)

Doodna hózhó
bózho = go
tl’óó = gó
not next-be.good = ADVZR outside = to
not well outside
ajoo’i go
nihił
’a-j-oo’i = go nihi-l
UNSPEC.OBJ-INDEF.SUBJ-PROG-SEC.PROG = ADVZER 1s- WITH
one being able to see things with us
oo-lwoł.
’-oo-l-wol
UNSPEC.SUBJ-PROG-CL-PUR.PROG
something was running along

‘We drove [without being able to see outside very well].’

Navajo = go-marked clauses also serve as complements of certain kinds of matrix verbs, such as those depicting immediate perception, knowledge, imagination, and evaluation. In ‘they saw [how his hat was sitting way over there]’ in 12, = go marks the complement ‘that his hat was sitting way over there’. (This sentence is itself embedded with = go as an adverbial in the larger sentence.) Examples like this indicate that the marker has been extended beyond a purely adverbializing function to a more general marker of syntactic dependency.

(12) Navajo enclitic = go as complementizer (Dolly Hermes Soule´)

Nt’é’é t’ahnt’é ashiké élya
but then unexpectedly boys those

\[
\begin{align*}
t’ahnt’ éé & \quad \text{hach’alá} \\
t’ahnt’ éé & \quad \text{ha-ch’al=á} \\
\text{unexpectedly} & \quad \text{4.POSS-hat = aforementioned that yonder further = at}
\end{align*}
\]

\[
\begin{align*}
ené & \quad \text{nivoh-hí} \\
ené & \quad \text{nivoh = di}
\end{align*}
\]

\[
\begin{align*}
si’ą & \quad \text{go} \\
si’ą & \quad \text{élí}
\end{align*}
\]

\[
\begin{align*}
s.PRF=solid.object.sit.NEUT.PRF = DEP & \quad \text{that} \\
it sitting & \quad \text{that}
\end{align*}
\]

\[
\begin{align*}
dayiitajo & \quad \text{élí} \\
dayiitajo & \quad \text{élí}
\end{align*}
\]

\[
\begin{align*}
distr:3.OBJ.OBLY.PRF-CL-ACC.PRF = DEP & \quad \text{that} \\
they seeing it & \quad \text{that}
\end{align*}
\]

\[
\begin{align*}
händedí ti’ & \quad \text{h-á-ni-da-da-di’-jí} \\
händedí ti’ & \quad \text{h-á-ni-da-da-di’-jí}
\end{align*}
\]

\[
\begin{align*}
4.OBJ=for-back-distr:3.OBJ-OBLY-3.SUBJ-3.SUBJ-with.arms-handle.solid.round. & \quad \text{object.PRF}
\end{align*}
\]

\[
\begin{align*}
\text{they picked it back up for him} \\
‘But then the boys suddenly saw [that his hat was way over there], and they picked it up for him.’
\end{align*}
\]

Many of these semantic relations between clauses can of course be made more explicit with the use of particles like ako ‘then’, ako ‘inda ‘when’, or hiniina ‘because of it’.
Complement constructions with verbs of cognition and evaluation are in 13 and 14.

(13) Navajo complement with /H11505 go

\[
\text{Aádeé' niiya´ o bił}
\]

\[
\text{Aádeé' ni-i-ya´ bi-l}
\]

[FROM TRM-SML-go.PRF SUBORD 3-to]

from there how I went to him

béhozin.

b-fél-ho-zin

3-reaching-things-know.NEUT.IMPRF

it is known

‘He knows [I came].’

(14) Navajo complement with /H11505 go

\[
\text{Ashzhish o shił ya´'a´t'e´eh.}
\]

\[
\text{a-sh-zhish o shi-ł ya´'a´-t'e´eh}
\]

[INDEF-1SG.SUBJ-dance.PRF SUBORD 1SG-to good-be.good.NEUT]

how I dance to me it is good

‘I like [to dance].’

This use of manner clauses as complements of certain verbs is similar to that in English, Russian, Mohawk, and some other languages: I heard how you went to Paris, She saw how he had fallen, I know how you like to travel, It’s nice how you watch out for him (Noonan 2006, Mithun 2008). As Michael Noonan points out (p.c.), with immediate perception verbs the perception and the situation perceived necessarily overlap in time. English complement clauses like these are now ambiguous between manner and fact: I heard how you went to Paris can mean either that I heard that you went by ship or simply I heard that you went.

LEXICAL AND SYNTACTIC FUNCTIONS ACROSS THE FAMILY. Navajo /H11505 go thus functions to form both lexical adverbs and adverbial clauses, as well as certain kinds of complement clauses. From the synchronic evidence alone, it is not possible to know for certain whether the lexical or syntactic function came first, though, as we have seen, similar developments in other languages of the world suggest that an extension from lexical to syntactic function is more likely. It would be useful to be able to trace the usage of the enclitic through centuries or millennia of documented speech, but of course there is no written record of Navajo comparable to that of English. Navajo has many relatives, however, so comparative evidence can provide clues.

The thirty-six Athabaskan languages are traditionally divided into three major subgroups: the Northern languages, spoken from northeastern Alaska towestern Canada (and previously down into Washington State and Oregon); the Pacific Coast languages, spoken along the southern Oregon and northern California coast; and the Apachean languages, spoken in the Southwest, of which Navajo is a member (Krauss & Golla 1981).

Saxon (2003a,b) shows that cognates of Navajo /H11505 go appear in languages in all three subgroups. She reconstructs their common ancestor as Proto-Athabaskan *taiʔ. (In many of the daughter languages uvular and velar obstruents have merged into a single velar series. Some of the Northern languages show lenition of the initial consonant. In some the glottal stop has created distinctive tone, and in some it has disappeared.) Saxon shows that both the lexical function of deriving adverbs and the syntactic function of forming temporal adverbial clauses can be reconstructed for the marker in the parent language. In what follows, representative examples of the reflexes of *taiʔ in languages
from each subgroup are given. First their lexical uses are surveyed, then their syntactic uses. The transcription and glossing conventions of the original sources are preserved. Where applicable, the name of the native speaker of the example is given along with the published source.

Among the Northern Athabaskan languages is Dena’ina (Tanaina), spoken on the south coast of Alaska. There the reflex of *gu≈ is written as a separate word /\ghu/, where orthographic (gh) represents a voiced uvular fricative. It can occur alone, translated ‘there’ or ‘that way’.

(15) Northern Athabaskan: Dena’ina
tallow there that he threw down that for it he looked
‘He looked for the tallow he had thrown down there.’ (Tenenbaum 1976:II.32; Alexie Evan)
b. nch’u âñishil hu /ghu/.
I didn’t fix you HEARSAY that.way
‘I didn’t make you to be that way.’ (Tenenbaum 1976:III.81; Antoine Evan)

It can be seen in adverbs of place and time in 16.

(16) Northern Athabaskan: Dena’ina (Tenenbaum 1976:II.32; Alexie Evan)
a. Ve’aqayta /\ghu/ nuna /\ghu/ nuhgelgexlu.
his poor wives the fish cache there they kept going
‘His poor wives kept going down to the fish cache.’
b. Shan /\ghu/ k’erelgha.
summer there they were putting up fish
‘In summer they were putting up fish.’

In Dene Suline (Chipewyan), another Northern Athabaskan language spoken in the Northwest Territories, Saskatchewan, Alberta, and Manitoba, the cognate marker has been reduced to /u/ and can undergo further reduction when it merges with a preceding vowel. Its use as a manner adverbializer can be seen in the old form for ‘well’, based on the root ‘good’, cognate with the Navajo form seen earlier.

Hodelyq njibic huz-x /\ghu/ hay na:ya’xoltsa:n.
all teepee good-ADVZR you.all.put.up
‘Put up all the teepees well.’

In the Pacific Coast languages, the cognates most often form adverbs of manner. The best documented of these languages is Hupa, spoken on the Northern California coast. Golla defines the Hupa cognate /xw/ as ‘in (such and such) a manner’ (1996:382). It is attached to an adjectival verb to form the adverb ‘well’ in 18a (cognate with both the Navajo and Dene Suline words for ‘well’), to a numeral in 18b, and to a postpositional phrase in 18c.

(18) Pacific Coast Athabaskan: Hupa
a. Q’ana’ ni-whong-xw ‘ahdiyah hay nay’a’xoltsa:n
again in.a.good.way it.has.happened that they have.found him
‘It’s a good thing that they found him.’ (Again it has happened well (Golla 1984:6-7; Leonard Jackson)
that they found him.”
b. lo:q-xw ‘e:nindelo.’ hay lo:q’.
one = ADVZR they.came.out the fish
‘All at once the fish came out.’ (Golla & O’Neill 2001:397, ex. 8)
c. k’ita.ya’/wilcei nil-wah = x’i

they.soaked.acorns REFL.IND.OBJ-apart.from

‘Each [wife] separately leached her acorn flour.’

(Golla & O’Neill 2001:401, ex. 59)

The Hupa enclitic also appears in locative adverbs.

(19) Pacific Coast Athabaskan: Hupa

a. xola≈k’inı̂cî’=x’ii will/cud

their.wrists = ADVZR they.were.seized ‘They were seized around the wrists.’

(Golla 1970:275)

b. Haya’l’angya’ k’i’qots’ na:wà ts’e:ch. k’itah = xw

then I.heard something.cracking going I.heard midst = ADVZR yidaq. uphill ‘I heard something make a cracking noise as it moved in the brush uphill.’

The third Athabaskan group, Apachean, consists of a set of closely related languages spoken in the American Southwest. Cognates of Navajo go appear in lexical adverbs in all of them. Navajo is a member of the Western branch of Apachean. The examples in 20 are from Jicarilla, a member of the Eastern branch.

(20) Eastern Apachean: Jicarilla

a. Da’ hooxjëe = go na’iizi. quite.good = ADVZR he.works ‘He works well.’

b. Shı˛’ı˛’ı˛’ go da’ goosdo’e. summer = ADVZR quite.it.is.hot ‘It is hot in the summer.’

Adverbs formed with cognates of Navajo = go vary widely in their frequency and productivity from one Athabaskan language to the next. They are pervasive in some of the languages such as Navajo, rarer in others such as Hupa, and nonexistent in still others such as Tanacross (Gary Holton, p.c.). Where they are rare, they tend to appear in formations that are likely to be old: highly frequent adverbs such as ‘well’ and ‘in summer’, or idiomatic formations such as Hupa la’ay = x’i at once, suddenly’ and luh = x’i ‘just’, both based on forms of the numeral ‘one’. The fact that descendants of *gu’i appear in lexical adverbs in all three major subgroups of Athabaskan (often the same lexical adverbs) allows for the inference that the earlier form functioned as a derivational adverb formative in their common parent, Proto-Athabaskan.

As Saxon (2003a,b) demonstrates, descendants of Proto-Athabaskan *gu’i are also used in languages in all three subgroups to form adverbial clauses, though to varying extents. Languages in all subgroups show it in temporal clauses, and some show it in locative and/or manner clauses and certain other constructions.

In Dena’ina the marker forms temporal clauses as in 21a, locative clauses as in 21b, and manner clauses as in 21c.

(21) Northern Athabaskan: Dena’ina

a. Nu’ik’at’ ghú ngadeld. he.hung.down ADVZR he.keeps.moving.his.feet.around ‘[While he was hanging] he kept kicking his feet around.’

(Tenenbaum 1976:II.34; Alexis Evan)
b. Yudeq ghu k'echnuldatl' ghu
up there they were eating berries
they got to the top of the mountain
'They got back up to the top of the mountain, [to where they had been eating berries].'
(Tenenbaum 1976:123; Antone Evan)

c. Ey ghu shel dghini ghu nagh hidatatl'
now to me she told
'They've come to us [just as she told me].'
(Tenenbaum 1976:III.23; Antone Evan)

The marker ghu can follow the clause within its scope, as in 21, or in certain constructions it can precede it, as in 22, sometimes combined with another marker as in 22c.

(22) Dena'ina
a. Hnuyu ghu idazq'en ezhi'i q'ach' k'tałdek'.
then ADVZR it burned north towards he shot his arrow
'Then, [as it burned], he shot his arrow toward the north.'
(Tenenbaum 1976 III.32, 31, 63; Antone Evan)
b. Ts'iłten ghini ghu t'iłdghinich' t'ehyiluqha'.
bow and arrow that ADVZR he had said they fixed it
'They fixed the bow and arrow [as he had told them].'
(Tenenbaum 1976 III.32, 31, 63; Antone Evan)
c. Ghu qadavidaznex hnuyu ey ghu nikanalghel.
ADVZR he heard her then there he lay down
'[As soon as he heard her] he lay down.'

The De¨ne Súłine´ (Chipewyan) cognate =á is also used to form adverbial clauses, but only temporal adverbials, as reported by Scollon (1985).

(23) Northern Athabaskan: De¨ne Súłine´ (Chipewyan)
Haya:ł cˇ'itindił-ne:Cˆi
then they are going amidst they saw that deer

In the Pacific Coast languages, adverbial clauses formed with reflexes of *caįʔ are noticeably rarer, but they do occur, generally as temporal clauses. Golla (1970:275) reports that for Hupa, 'when the head of the phrase is a predicate the translation is often 'while . . .-ing'.

(24) Pacific Coast Athabaskan: Hupa
Haya:ł cˇ'itindił-ne:Cˆi=x*
yu:7alca:n hay k’tilxan.
then ADVZR they are going along midst=ADVZR they saw that deer

While they were going along, they saw a deer.

Other Apachean languages show adverbial =go clauses similar to those in Navajo.

(25) Eastern Apachean: Jicarilla
Nyoł=go
doosh tlį̨hḇó da.
Ne convincible to me it is good ADVZR
'I don't like it [when it is windy].'

(26) Eastern Apachean: Jicarilla
Yoconc=go
da’át’i adł’ina
when they threw (pole) it went on it was
[Although they threw the poles after the hoop] it rolled straight on,
The sentence in 25, translated by Wilson and Martine as ‘I don’t like it when it is windy’, could also be translated more literally as ‘To me it is not good being windy’. The structure is parallel to that of the Navajo sentence seen earlier in 14, translated by the speaker ‘I like to dance’.

The presence of both lexical adverbs and temporal clauses with *nanu in all three branches of Athabaskan allows the inference that these two lexical and syntactic functions can be reconstructed for the parent language, as proposed by Saxon. The extent of use of the marker in locative, manner, reason, purpose, and/or conditional clauses varies from language to language.

The extension of *nanu into discourse. As described above, Navajo *go marks otherwise syntactically independent sentences as dependent and subordinate within a stretch of discourse, providing background information, explanation, or commentary without advancing the storyline. It is not difficult to imagine how the marker could have been extended from syntax to discourse. The relationship between the two sentences below, ‘That mountain lion ran. I guess it was afraid of dogs’, is not very different from the relationship between the clauses in the sentence seen earlier in 9: ‘It being very sweet, he started to eat it’.

When we examine textual material from the Northern Athabaskan languages, the absence of this discourse use of the marker is immediately obvious. The two Northern Athabaskan languages cited earlier are represented by rich text collections: Dena’ina in Pete 1974, 1977, Kari 1975, 1977a,b, Tenenbaum 1976, Nicolie 1977, Kari & Fall 1978, Chickalusion & Chickalusion 1979, and Kari & Boraas 1991; and Dené Súlíné (Chipewyan) in Goddard 1912 and Li & Scollon 1976. The texts in both languages show extensive use of reflexes of *nanu in the formation of subordinate adverbial clauses, but no uses of it to mark the subordinate status of sentences in discourse. The material is especially rich in narrative, just the kind of speech that would exhibit such constructions if they were available. It might be thought that the absence of such marking could be attributed to the kind of halting dictation necessitated by longhand transcription. Much of the material, however, in particular the four-volume set of texts edited by Tenenbaum (1976) from which the examples cited here are drawn, is based on audio recordings. Ronald Scollon (p.c.), who has long experience with Dené Súlíné (Chipewyan), confirms that he has never seen such discourse use of the cognate marker in that language. Different markers are used for discourse purposes of that type (Scollon 1977, 1985).

An examination of available textual material in other Northern Athabaskan languages discussed by Saxon shows the same absence of discourse use of reflexes of *nap? Ahtna
THE EXTENSION OF DEPENDENCY BEYOND THE SENTENCE

For the Pacific Coast languages there is also extensive textual documentation. Hupa texts are in Goddard 1904, Golla 1977, 1984, and Golla & O’Neill 2001, the last a monumental collection of seventy-seven texts first collected by Edward Sapir in 1927 and meticulously retranscribed and glossed by the editors. At least part of this corpus, the narratives and conversations in Golla 1984, were transcribed from audio recordings. Examination of this textual material immediately shows that Hupa \( \text{go} \), the reflex of Proto-Athabaskan \( *\text{go} \), is not exploited to indicate pragmatic subordination of sentences in discourse as it is in Navajo. Golla (p.c.), who has extensive experience with the language and its speakers, confirms the absence of such use.

The complete absence of the use of cognates of Navajo \( \text{go} \) to subordinate sentences in discourse in both these Northern and Pacific Coast Athabaskan languages suggests that this use cannot be reconstructed for the Proto-Athabaskan marker. It appears to be a more recent development within Apachean alone.

Early in the twentieth century, Pliny Earle Goddard collected extensive textual material not only in Dene Suline (Chipewyan) and Hupa, but also in Apachean languages: Jicarilla Apache (1911), the San Carlos dialect of Western Apache (collected in 1905, 1910, 1914 and published in 1918 and 1919), the White Mountain dialect of Western Apache (collected in 1910 and published in 1919 and 1920), and Navajo (collected in 1923-24 and published as Goddard 1933). Though this material shows extensive use of \( \text{go} \) in adverbs and adverbial clauses, it shows little evidence of the discourse use of \( \text{go} \) that is so pervasive in modern Navajo speech. This absence could be due to the process of documentation. The slow dictation necessary for longhand transcription could make it more difficult for speakers to keep track of intricate narrative structure. It could, alternatively, indicate that the discourse use is recent, innovated within the last century.

A rich set of Navajo texts was collected about the same time by Edward Sapir (thirty-two texts) and Harry Hoijer (nineteen texts) during the summer of 1929 at Crystal, New Mexico (Sapir 1942). The collection includes myths and origin legends, ethnological narratives, personal narratives, prayers, and accounts of daily life. Like the Goddard texts, they show ample use of \( \text{go} \) in lexical adverbs and syntactically subordinate clauses. The marker is conspicuously absent, however, in most contexts where it would be used for larger discourse purposes now, such as at the openings of narratives to set the scene, in asides, in explanations, and in evaluations. But a few \( \text{go} \)-marked sentences do appear. In one long text consisting of 367 sentences (as delineated by Hoijer’s period punctuation), there are four. In the modern language the density of \( \text{go} \) sentences varies with style and genre, but this text is of the type that would be likely to show extensive use of the \( \text{go} \) construction if related by Mrs. Soule, the narrator of the modern Hont’ah anecdote seen earlier. This 1929 text, titled ‘A Navaho’s historical reminiscences’, opens with a lengthy description of the place where the speaker was born and what life was like there at the time, but without a single \( \text{go} \) sentence. Well into the account, however, the speaker tells how some Navajos killed some Utes and the Utes rose up against them. At this point two \( \text{go} \) sentences occur in succession.

(28) Navajo \( \text{go} \) sentences

\[
\text{‘i'dha, bilagi:n na bim'ik’ehgo.}
\]

‘And so, then, the Americans made a plan.’

\[
\text{‘i'dha’ii’ji. Lincoln yolyí go wàííndi ndi sítí’i go, na’áwní: hilgo.}
\]

‘At that time one called Lincoln lived at Washington, he being the chief.’
Much later in the narrative, the speaker describes a violent event. That passage was translated: 'What a dreadful uproar was heard outside. What terrible sounds of fighting were heard. And, in this way, that Agent, holding a gun in this way with the hole out, was trotting about stooping.' The passage was followed by the \( =\) go sentence in 29.

\( (29) \) Navajo \( =\) go sentence

\[ 'He was afraid, he was afraid of the Indians.' \]

The functions of the independent \( =\) go sentences in 28 and 29 are much like those in modern speech: setting the scene, providing background and explanation. They are much rarer, however: four of 867 sentences in this 1929 text in contrast with eight of sixteen sentences in the modern Hont’ah anecdote. They do not occur at all in many of the other 1929 texts.

Another collection of texts, written in Navajo in the 1940s and early 1950s (Young & Morgan 1954), contains some more \( =\) go sentences. As Willem de Reuse (p.c.) has kindly pointed out, some of these written texts show no discourse uses of \( =\) go at all. The \( =\) go clauses were punctuated by their writers as separate sentences but translated as English subordinate clauses. Jalon Begay (p.c.) observes that certain other texts by the same authors, particularly personal narratives, show considerable discourse use of \( =\) go. The texts with the \( =\) go sentences are often somewhat more colloquial, suggesting stylistic variation. The sentence in 30, written by Scott Preston, ended a paragraph translated as follows: 'It’s our own fault. And then there are little minor ill-feelings that get between us and cause trouble. That’s how we bring trouble among us, as I hear about it. So it’s our own fault when we sit before a judge for trial, and when the policeman arrests us.'

\( (30) \) Navajo \( =\) go sentence

\[ 'It’s our own fault. And then there are little minor ill-feelings that get between us and cause trouble. That’s how we bring trouble among us, as I hear about it. So it’s our own fault when we sit before a judge for trial, and when the policeman arrests us.' \]

As noted earlier, Navajo is a member of the Western subbranch of Apachean. To my knowledge there has been no other discussion of comparable discourse use of \( =\) go in other languages in this subbranch. For the White Mountain dialect of Western Apache, Potter describes the use of \( =\) go as a contrastive focus marker (1997:242–44) and notes a similar use in Navajo (Young & Morgan 1987:21, cited in Potter 1997:247). For the San Carlos dialect, de Reuse and Goode mention the use of \( =\) go in progressive commands (2006:344). These are of course developments of a different kind.

Discourse uses like those seen earlier in Navajo have, however, been observed in a language of the Eastern subbranch: Jicarilla. In a description of Jicarilla clause combining, Jung (2002) includes a brief section on ‘discourse embedding.’ Verbal predicates marked with the linker \(-\) go do not always occur in a clausal combination together with an unmarked verbal predicate, but are also found as structurally and intonationally independent units in discourse. These clauses can be said to be dependent not on another single clause, but rather to be embedded in a larger discourse unit (Jung 2002:176).

She provides the example in 31, noting that it ‘relates background information on the general situation in this narrative’.

\( (31) \) Jicarilla Apache

\[ 'Me and my little sister were on horseback.' \]
For another Eastern Apachean language, Lipan, there is just one published text, recorded in the late 1930s (Hoijer 1975). The text shows syntactically subordinate clauses with =go, but no independent sentences with the enclitic. No published textual material is available for Plains (Kiowa) Apache, another Eastern language. If the discourse use of =go is indeed confined to just one Western Apachean language (Navajo) and one Eastern language (Jicarilla), it would be interesting to know whether it developed independently in the two or was stimulated by contact.

1.3. INTERIM SUMMARY: NAVAJO. Navajo shows a grammatical development whereby the enclitic =go, a marker of syntactic dependency and subordination of clauses within sentences, has been extended to mark the dependency and subordination of independent sentences within larger discourse and pragmatic contexts. The degree to which the discourse/pragmatic functions of the marker are exploited varies across genres, styles, and speakers. Because of the role of =go sentences in structuring texts, it is more meaningful to examine coherent discourse units, like the anecdote seen earlier, than random stretches of speech. In a sample of spontaneous speech by Mrs. Soule, 285 of 754 clauses (37.8%) carried =go marking, but even within the speech of this one speaker, the density of =go marking varies across genres, from 19% to 63% in this sample.

Comparative data indicate that the Navajo discourse use of =go is the result of a diachronic increase in structural scope. As shown by Saxon (2003a) and further exemplified here, an ancestor of =go can be reconstructed for Proto-Athabaskan as a derivational device for forming lexical adverbs. It appears with this function in languages in all three Athabaskan subgroups. It is also used in languages in all groups to form temporal adverbial clauses. In just one subgroup, however, the Apachean languages of the Southwest, the scope of the enclitic has been extended from the domain of the sentence to larger contexts. It is particularly prevalent in narrative, where speakers mark departures from the storyline. This development may have occurred relatively recently, perhaps within the last century. It is now robust, however, in both the Western Apachean language Navajo and the Eastern Apachean language Jicarilla (Jung 2002).

2. CENTRAL ALASKAN YUP’IK. Grammatical developments of a strikingly similar nature can be seen in Central Alaskan Yup’ik, a language of the Eskimo-Aleut family spoken in southwestern Alaska. The syntactic sentence is clearly delineated in Yup’ik: every clause contains explicit marking of its independent or dependent status. In example 32 below, the first clause ‘I just traveled from home’ is marked as independent by the indicative suffix -u, while the second ‘to come here’ and third ‘to work’ are each marked as dependent by the subordinative suffix -lu.

(32) Central Alaskan Yup’ik (Elizabeth Charles Ali)

Nunamnek watua ava-i ayalltun nga,
nummek watua avai ayag-litow-nga
land-ABL.1SG/SG just now over there leave-PAST-INTRINSIC-1SG
from my home just now over there I left

‘I just traveled from home
maavirhu,
caliyarmhu-waa.
maa-vir-hu nga cali-yarm-hu nga = wa
here-go.to-SUBORD-1SG work-go.to-SUBORD-1SG = answer
I coming here I going to work
to come here to work.’
All Eskimoan verbs end in an inflectional suffix that consists of what is termed a mood marker by Eskimologists plus a pronominal ending that identifies the core arguments of the clause. Some of the Eskimoan mood categories, termed independent moods, are similar to those found in many other languages, such as the indicative, interrogative, and optative. Others, termed dependent moods, correspond to subordinating conjunctions in many other languages, marking temporal, causal, or conditional relations. The Central Alaskan Yup’ik moods are listed in 33.

(33) Central Alaskan Yup’ik moods

Independent moods
- **INDICATIVE**: statements, yes/no questions
- **INTERROGATIVE**: content questions
- **OPTATIVE**: tentative statements, commands

Dependent moods
- **PARTICIPAL**
- **SUBORDINATIVE**

Connective moods
- **CONTEMPORATIVE I** ‘when (in the past)’
- **CONTEMPORATIVE II** ‘while’
- **CONTEMPORATIVE III** ‘at the same time that’
- **PRECESSIVE** ‘before’
- **CONCESSIVE** ‘although, even though, even if’
- **CONTINGENT** ‘whenever’
- **CONSEQUENTIAL** ‘because’
- **CONDITIONAL** ‘if, when (in the future)’

Good general grammatical descriptions of Yup’ik can be found in Jacobson 1995 and Miyaoka 1996. Of interest here are two of the dependent mood suffixes, traditionally termed the participial and the subordinative.

An example of the participial mood is in 34, from a telephone conversation. The participial clause ‘really having fun’ elaborates the main point, ‘I’m very well’.

(34) **Yup’ik participial mood**

Assiqapiartu

Qanrutelaranka caknang, anglanipiarrianga
assir-qapiar-tu-a cakneq anglan-piar-ria-nga
good-really-INTR.INDIC-1SG very have-fun-really-PART-1SG
‘I’m very well, really having fun.’

Examples of the subordinative mood can be seen in 35–38. Subordinative mood clauses often function like subordinate clauses in other languages. They can serve as complements, as in 35 and 36.

(35) **Yup’ik subordinative complement**

Quarutjarlara

Qamertutelaranka
qamer-ute-lar-a-nka
speak-to-habitually-TR.INDIC-1SG/3PL
‘I tell them’

assir-hun-geq
assir-hun-ten-geq
be-good-SUBORD-2SG = HEARSAY
you being good, I hear
that you are fine’
They can also function as adverbial clauses, as in 37 and 38. They may precede or follow their matrix clause.

(37) Yup’ik subordinative adverbial clause (George Charles)

Aataka ayaglallruq,
aata-ka ayag-lar-llru-u-q
father-1sg/sg go-customarily-PAST-INTR.INDIC-3sg

‘My father used to go traveling using dogs by dogsled.’

(38) Yup’ik subordinative adverbial clause (Elizabeth Charles Ali)

Wangkuta,
we
paninka maliklu-ki,
panig-nka malik-le-ku
daughter-1sg/3pl take.along-subord-n/3pl

‘We ourselves want to go up there with my daughters in the summertime.’

Adverbial subordinatives like these allow speakers to package various components of what is portrayed as a single event together in one sentence. The subevents expressed by clauses in the above examples are tightly integrated spatially, temporally, and referentially. The traveling and using dogs described in 37 share the same spatial trajectory, time, and agency, as do the going north and taking the daughters in 38. Both of these examples were later translated by their speakers with a single English clause: ‘My father used to go traveling by dogsled’ and ‘We want to go up there with my daughters in the summertime’. Simultaneity is not a requirement, though close spatial and temporal association are typical.

In terms of reference, however, adverbial subordinative clauses are subject to a formal constraint: they must have the same subject as their matrix clause. This subject coreference can be seen in the examples above: ‘Now I’ve started (I) writing them down,’ ‘My father used to go traveling (he) using dogs’, ‘We want to go up there (we) taking my daughters’. (The pronominal suffixes glossed R specify coreference with the subject of the matrix clause.) Speakers can use subordinative clauses that would
not ordinarily show the same subject as the matrix by means of a special grammatical
maneuver. A dummy coreferential agent is introduced into the subordinative clause
with a causative. For ‘Whenever it froze, they used to go dipnetting’, Mr. Charles said
‘(They) letting it freeze, they used to go dipnetting’.

(39) Yup’ik causative for coreference

George Charles

Ciku vkar-qaarluku pigaqan.
icu-vkar-qar-lu-ku pi-gaqa-an
allowing it to freeze immediately before whenever it did
Whenever it froze
cikum qaingani qalutuq pilallraut.
icu-m qai-ngani qalu-ruq pil-lar-lu-t
the ice’s its surface dipnetting they would do
they used to dipnet on the ice.’

The formal nature of this constraint is nicely illustrated by an example from Jacobson
1995. For ‘I was born after the death of my grandfather’, Jacobson cites the sentence
below, literally ‘I was born, (I) letting my grandfather die first’.

(40) Causative subordinative for purely grammatical purposes  (Jacobson 1995:333)

Yuurtellruunga

Yuk-urte-lru-u-nga
person-become-PAST-INTR.INDIC-1SG
‘I was born
apa’urluqapa’urluqapa’urluqapa’urluqa tuqarraareluku.
apa-nururlu-ka tuq-raat-e-te-lu-ku
grandfather-dear-1SG/SG die-first-CAUS-SUBORD-3SG/3PL
together they would do
my grandfather letting him die first
after my grandfather died.’

These constructions also show integration in their intonation. Some are pronounced
under a single intonation contour, and some under more than one, but there is no
terminal contour or final fall until the end of the full construction. As can be seen from
the pitch trace in Figure 2, the sentence ‘We want to go up there with my daughters
in the summertime’ was pronounced in a series of intonation units, but without a final
fall until the end.
Subordinatives also appear in numerous idiomatic constructions, many involving particular verb roots or derivational suffixes. A survey of such uses is in Miyaoaka 1997. One common construction is used for expressing thanks.

(41) Yup’ik thanks (Elena Charles)

Kitaki quya-na call-ar-luten.
kitaki quya-na call-ar-lu-ten
well be.thankful-oh.how.it.causes call-LINK-SUBORD-2SG
well thanks you calling

‘Well then, thank you for calling.’

In elicited translations of English sentences, the distribution of independent and dependent clauses in Yup’ik, as in Navajo, is exactly as would be expected. In unscripted, spontaneous speech, however, the patterns are quite different. The narrative in 42 below was part of a family conversation around the breakfast table. One of the children had just asked her mother to tell about her first trip upriver for moose as a young bride. So that the larger grammatical structure of the passage can be seen, only the free translation is included here. The original Yup’ik is in the appendix. Lines in the translation generally correspond to clauses in the original. (Lines with no mood specified are not full clauses.) Indicative and interrogative clauses are arranged flush-left, participial clauses are indented once, and subordinative clauses twice.

(42) Yup’ik Moosehunt narrative: Elena Charles, speaker

We were waiting for the moose SUBORDINATIVE
to come out [from the thicket to the sound]. SUBORDINATIVE
The moose was indeed about to come out. INDICATIVE
We made a commotion. INDICATIVE
We got lively in the boat. SUBORDINATIVE
This boat began to rock. INDICATIVE
(Laughter)
I made lots of noise. SUBORDINATIVE
‘Quick! Yes, the one across there!’
He shot the one across there with the antlers. INDICATIVE
Even as he began to shoot that one with the antlers CONCESSIVE
its relatives, a female and her offspring— SUBORDINATIVE
And so he shot the one with the antlers repeatedly. SUBORDINATIVE
And then that one got up suddenly. SUBORDINATIVE
After awhile it went up. SUBORDINATIVE
And our motor wouldn’t start. SUBORDINATIVE
He said that I should row the boat and we could cross. SUBORDINATIVE
You remember that Frank had a boat. PARTICIPIAL
A great big wooden boat.

Over there, along the other side, the our— SUBORDINATIVE
I was rowing quickly with the oars. SUBORDINATIVE
I crossed and then SUBORDINATIVE
I was rowing with the oars. SUBORDINATIVE
(Laughter)
Just an enormous old moose!
It was accompanied by a smaller one right in front of the boat.
‘Hurry! Go as fast as you can!’
He, on the other hand, was probably trying to start the motor.
And so after I went that way I crossed, once again, in that direction.
‘And the moose?’
‘Don’t pay any attention to them. Dock in front of them.’
‘And what shall I do if they attack me?’
‘They will not attack you!’

The dependent moods are overwhelmingly more frequent than the independent moods here: there are twenty-three dependent mood clauses but just six independent clauses (indicative and interrogative combined). Both the participial and subordinative moods appear in clauses that would be classified as independent sentences on prosodic and semantic grounds, clauses that were translated by speakers with independent English sentences. The sentences ‘You remember that Frankie had a boat’ and ‘He, on the other hand, was probably attempting to start the motor’ are both participial.

‘We got lively in the boat’ and ‘I made lots of noise’ are both subordinative. The prevalence of dependent moods in discourse in Eskimoan languages has been noticed by a number of researchers, including Kalmar (1982), Woodbury (1983), Jacobson (1995), Lasswell (1996), Miyaoka (1996, 1997), and others. Dependent moods used in otherwise independent sentences are termed ‘autonomous’ (Jacobson 1995).

2.1. Yup’ik Autonomous Participials. When functioning as syntactically dependent clauses, participials are typically descriptive, as in example 34 above, ‘I’m fine, really having fun’. They provide extra information without moving the action along. The Moosehunt narrative in 42 shows the extension of this descriptive function into larger stretches of discourse. Autonomous participial sentences are used to provide background information, parenthetical comments off the event line, elaboration, explanation, and evaluation. These are the same functions served by the Navajo adverbializer.

Autonomous participials are often used when speakers open narratives or episodes by setting the scene. The autonomous participial sentence in 43, for example, was the beginning of a joke.

(43) Yup’ik participial setting the scene (George Charles)

\[
\begin{align*}
\text{tau\-ku\-g\-g\-g\-q} & \quad \text{angut\-e\-k pi\-ssur\-\text{I\-ria-k}} \\
that \text{RESTRI-DU RESTRI-DU} & \quad \text{hearsay man-INSTR-3DU} \\
\text{man-DU} & \quad \text{thing-catch-INSTR-PART-3DU} \\
\text{those two men} & \quad \text{they hunt} \\
\text{they hunt} & \quad \text{they hunt} \\
\text{‘Those two men were out hunting.’}
\end{align*}
\]

In her Moosehunt narrative, Mrs. Charles provided off-line parenthetical information with an autonomous participial. She had just remarked, ‘And our motor wouldn’t start. He said that I should row the boat across’.
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(44) Yup’ik parenthetical participial
Icugg’, Frank-iq angyangellru
remember Frank-link boat-have.as.own-PAST
Frank he had a boat

(45) Yup’ik autonomous participial off-line observation
Alarte-ria nga-tang
look-INTR.PART.1SG

‘See, I made a mistake.’

(46) Yup’ik autonomous participial explanation
Beans-anek icivarpak neqengq
beans-LINK-ABL.PL recently-very food-have-INTR.PART.1SG

‘For a while now she has only had beans as food.’

(47) Yup’ik autonomous participial explanation
Nallukit-wa tayim
not.know-TR.PART.3PL/3SG = answer elsewhere

‘They actually don’t know that I’m away;’

Qanercuuteksait-ke okwa
speak-instrument-not.yet-TR.PART.1SG/3DU

I haven’t telephoned them yet.’

2.2. YUP’IK AUTONOMOUS SUBORDINATIVES. As a clause-level marker of syntactic dependency, the Yup’ik subordinative suffix links closely related aspects of what is portrayed as a single event, as in ‘Now I’ve started [writing them down]’; ‘My father used to go traveling [by dogsled]’, and ‘We want to go up there [with my daughters]’ discussed earlier. As we saw in the Moosehunt text, the subordinative also appears pervasively with what might be judged to be independent sentences on prosodic and
semantic grounds. They can end with final terminal prosodic contours, and are typically translated into English as independent sentences by bilingual speakers.

There is an additional important syntactic indicator of their independent status. Recall the requirement that subordinative clauses serving as syntactically subordinate constituents of complex sentences must have the same subjects as their matrix clauses. Autonomous subordinative sentences, by contrast, need not share their subjects with an adjacent superordinate clause or sentence. In fact there is often no identifiable superordinate sentence at all. The function of the subordinative mood has been extended from marking the dependency of clauses within a sentence to the dependency of sentences within a larger context. The nature of the dependent relationship is not precisely the same as that marked by the Navajo go or the Yup’ik participial. The subordinative links closely related events or states to each other. The marker signals dependency but not necessarily subordination.

The precise definition of what constitutes an event remains an object of ongoing discussion in the literature, involving such features as space, time, causality, and intention. Zacks and Tversky report that ‘When asked to identify event boundaries, people tend to divide activity at locations that correspond to maxima in the number of physical features that are changing’ (2001:7). They conclude that there is more to the story than physical change, however. ‘Event unit boundaries are conditioned on physical features of the activity. However, effects of experience, instruction, and expectation on segmentation patterns argue for top-down influences as well’ (2001:9). Zacks and Swallow make a further important point:

Event boundaries are hierarchically structured, such that fine-grained events are clustered into larger coarse-grained events. . . . Segmenting an activity well is not simply a matter of identifying the right event boundaries; it also requires tracking how sets of fine-grained events group together into larger meaningful units. (2007:80, 81)

The function of the Yup’ik subordinative has been extended from grouping events at one level to grouping them at a higher level.

Numerous examples of the higher-level organizational function of autonomous subordinatives can be seen in the Moosehunt narrative, such as the passage in 48. The series of subordinative sentences apparently ties together the quick succession of subevents that together constitute the taking of the moose.

(48) Yup’ik sequence of subevents in narrative (Elena Charles)

Cirunelek tuai nutgarikuku

horn-one.having and so shoot.firearm-repeatedly

‘And so, he shot the one with the horns repeatedly.’

Tuai’i’ll taum’ pipettu

tuai = lhu tauma pi-qertel-u-ni

then = too that.restr do-suddenly

‘And then that one suddenly got up.’

Ava-i tagelhu

avai = i tagel-u-ni

yonder = interj go.up.from.water

‘It went up.’

Massinarpuk-lhu ayarciganani.

massin-ar-puk = lhu ayag-ciiga-na-ni

machine-unable-go

‘And our motor wouldn’t start.’
The lines of text in this example are arranged so that each represents a clause. Prosodically, lines 2 and 3 were combined into a single phrase, as were lines 5 and 6. Otherwise there was less intonational integration than might be expected of elements of a single sentence. There are final terminal falls in pitch at the ends of lines 1, 3, 4, and 6, each followed by a pitch reset and a substantial pause before the following intonation unit (1.625 seconds, 2.136 seconds, 3.53 seconds, and 0.905 seconds). The sound wave and pitch trace can be seen in Figure 3.

This passage also illustrates the relaxation of the requirement of coreferentiality for subjects of linked sentences. The subjects in the sequence above are ‘he’ (her husband), ‘that one’ (a moose), ‘it’ (the moose), ‘our motor’, ‘I’, and ‘we’.

Not surprisingly, the density of autonomous subordinative constructions with this larger discourse function varies across genres. The constructions can be pervasive in narrative. The Moosehunt narrative shows a ratio of twenty subordinatives to five indicatives, or four to one (20/29 or 69% of all clauses). Some narratives told by the speakers cited here show ratios as high as thirteen to one, that is, thirteen times as many subordinatives as indicatives. By contrast, some conversations among the same speakers show ratios of one to two, only half as many subordinatives as indicatives. The greater frequency of subordinative constructions in narrative is not entirely surprising. Narrators can hold the floor and talk more coherently, with more planning and less interruption, than speakers engaged in quick repartee. Stories have structure, with openings that set the scene, plots, climaxes, and perhaps morals or epilogues, structures that skilled speakers convey in Yup’ik with their use of particular moods in addition to other devices. Of course in normal interaction there is seldom a clear distinction between narrative and conversation. Pure narrative might occur when a linguist switches on a recorder and asks a speaker to tell a story, or on specific occasions when people gather around a storyteller for evening entertainment, but narrative occurs more often in the context of conversation, where it can range from a few lines to a long monologue. In
Mr. Charles was describing his plans to visit his sister. Autonomous subordinatives were used for successive events, as they would be in a narrative.

(49) Yup’ik sequential events in conversation (George Charles)

Ayagciqsugnarquqa tamaavet
leave-FUT-probably-INTR.INDIC-1SG there.near.listener.EXT-TERM
ayag-ci-q-e-yugnarqe-u-a tamaa-vet
fly-device-VIALIS
‘I’ll probably go down there by plane,
numa-kuar-cuute-ka = lla tua-i aqvahtsu
land-go.by.way.of-device-1sg/sg = too and.then fetch-SUBORD-R/3sg
enenvi
then I’ll get my car at your house.
Aqvarraar aqva-re-aq-a
fetch-first-SUBORD-R/3sg and.then also learn
enavni
and then I’ll get my car at your house.
Ellaita-llu, niicugniuraq
they.ERG too listen-keep-habitually-SUBORD-R/1sg
ulli na
and they write in Yup’ik.’

Here, as in earlier examples, subordinative sentences are often set off by the same particles that link independent sentences to the larger context, such as tuai ‘so then’ and tuai-llu ‘and so then’.

Strings of autonomous subordinatives are used in other discourse genres as well to group closely related sequences of actions. Procedural texts, for example, typically outline successive steps. The connection marked by subordinatives is not always purely temporal. Autonomous subordinatives are also used to link topically related propositions, as in the last line of 50.

(50) Yup’ik topically related comments (Elizabeth Charles Ali)

Ellaita-llu, niicugniuraqta, they.ERG too listen-keep-habitually-SUBORD-R/1sg
ulli
And as for them, they always listen to me,
ellaita-il’ igaraqhtun engtu, they.ERG too write-habitually-SUBORD-R/3PL person-AEQUALIS
ulli
and they write in Yup’ik.’

(Elena Charles: Kiiki kiiki. ‘That’s good.’)
Tua-i alangrunarqeltueng.
tuai alangrun-narqu-hu-tueng
so surprise-tend to cause-subjunct-3PL.

‘Well, they are amazing.’

Autonomous subordinatives can relate statements across speakers’ turns in conversation. The answer to ‘Is my brother there?’ in 51 below (part of a telephone conversation) was given in the subordinative, showing its pertinence to the question.

(51) Yup’ik indicative yes/no question (Elizabeth Charles Ali, Elena Charles)

EA: Amngacuuaqa tamaantuq?
amngar-cu-a-k-tamaa-nete-u-q
older.brother-little-1SG/SG there.near.listener/ext-be-intr.indic-3SG
‘Is my older brother there?’

EC: Anngacuaran tua-i, ayayu-qa
amngar-cuara-n tua ayag-yu-ite-na
older.brother-little-2SG/SG then leave-never-subord-3SG
maantaurlali.
maa-nete-aar-lar-Iria
here/ext-be-continue-regularly-intr.part.3SG
Natmurciu na
natmur-cu-ite-na
he continues to stay here. He does not go anywhere.’

The question in 51 was in the indicative, but yes/no questions are also frequently posed with autonomous subordinatives. The use of the subordinative can mark relevance to preceding discussion. Mr. Charles had initially asked the first question in 52 below with an indicative: ‘Did they come to get you?’. Instead of answering directly, his mother opened up a discussion about kinship relations involving the people in question. The result was a digression of sixty-eight intonation units or prosodic phrases. At the end of the digression, Mr. Charles posed his question again, this time in the subordinative. The subordinative tied this question to his earlier attempt.

(52) Yup’ik subordinative yes/no question (George Charles, Elena Charles)

GC: Taillruut-qaa, taukut
tai-lru-u-t = qua
‘Did they come, those people I telephoned, did they come?’

[Digression of 68 prosodic phrases]

GC: Tua-lu-qua taukut qayahle?
tua = luo = qua tauka-t
then = also-q that.restr-pl. fetch-subord-0/2PL.
‘So then did they come to get you?’
His mother’s response was also subordinative, marking its pertinence to his question. Content questions can be asked in a special independent mood, the interrogative.

(53) Yup’ik interrogative
EC: Camek cali si?

camek cali-si-t
what-ABL work-INTERR-2SG
“What is your work?”

EA: Tua-i-qqag qalamciyarturlua.
tuai-qqag qalamciyurtur-lu-a
and.then HEARSAY tell.story-go.to-SUBORD-1SG
“Well, to tell stories.”

The answer to this question was an autonomous subordinative, a mark of its pertinence to the preceding question. But content questions can also be posed with autonomous subordinatives. One day Mrs. Ali was telling her brother how much she was enjoying listening to recordings he had made of family gatherings. He responded with the subordinative question in 54.

(54) Yup’ik subordinative content question
Ca nii lu ku?
ca niite-lu-ku
what hear-SUBORD-3SG
“So what are you listening to?”

His use of the subordinative linked his content question to her preceding remark.

Interactive constructions of another type, commands, are formed with the independent optative mood. Autonomous subordinatives are often used in their place, however. This pattern parallels those in many other languages, where moods that are less realis convey less directness and thus a kind of mitigation and courtesy.

(55) Subordinative command
Kiiki, cukangaqha ten ayaglu ten!
kikii cukangaq-narxe-ten ayag-lu-ten
hurry be.fast-become-able-SUBORD-2SG GO-SUBORD-2SG
‘Hurry, go as fast as you can!’

2.3. The Direction of Historical Development. It is possible to identify possible historical sources of Yup’ik dependent mood markers. As noted earlier, verbs in Eskimo-Aleut languages consist of one and only one initial root (termed a base by Eskimologists), optionally followed by one or more suffixes (termed postbases), then an inflectional ending consisting of a mood marker and a pronominal suffix.

Base Postbases Ending
mood pronominal suffix

The modern Yup’ik participial and subordinative inflectional mood suffixes, like most other mood suffixes, show striking similarities to certain derivational suffixes (postbases).

Origins of the Participial Mood Markers. There are two participial mood suffixes, -lla for intransitives and -ke for transitives. The sources of both can be seen in nomi-
nalizers that are reconstructed for Proto-Eskimoan. Reflexes of both of these nominalizers persist with the same function in Yup’ik and with the same phonological idiosyncrasies as the modern mood markers.

The nominalizer -\textit{lria} still functions productively in modern Yup’ik and other Eskimoan languages to derive nouns referring to the absolutive argument of the verb stem: ‘the one who’. Examples can be seen in ‘one who studies’ (‘student’), ‘things told’ (‘stories’), and ‘bad one’ below.

(56) Yup’ik nominalizer -\textit{lria} (Elizabeth Charles Ali, Elena Charles)
a. Ukut elitnau \textit{lria} \textit{aqquutaanga} ukut-\textit{t} elitnau-\textit{lria-t} \textit{aqquut-\textit{u-a-atnga}}
\textit{those.RESTR-PL study-NMZ-PL} question-customearily-TR.INDIC-3PL/1SG
\textit{those}\textit{\textit{ones}} who study
\textit{atam . . .}
atam listen
‘Those \textit{students} always ask me things.’
b. Taugaam yuut qanek \textit{lria} niicugait. taugaam yug-\textit{t} qanek-\textit{lria-t} niite-yug-a-it
\textit{however person-PL tell-NMZ-PL hear-DESID-TR.INDIC-3PL/3PL}
\textit{however people told}\textit{\textit{ones}} they want to hear them
‘But people want to hear the Yup’ik \textit{stories}.’
c. Assiite \textit{lria} mek-gguq, tunellinikiit. assiite-\textit{lria-\textit{mek}} /H11505 gguq tune-llini-ke-iit
\textit{bad-NMZ-ABL} /H11505 HEARSAY sell-apparently-TR.PART-3PL/3SG
\textit{a bad}\textit{\textit{one}}, they say \textit{they apparently sold him}
‘They apparently sold him \textit{a bad one}.’

The forms of the modern intransitive participial are essentially identical to those of this nominalizer. Third-person singular participial verbs have the same ending as the nominalized verbs, -\textit{lria}: \textit{alarte-\textit{lria}} ‘s/he made a mistake’ (\textit{err-INTR.PART}). Third-person dual and plural forms -\textit{lriik} and -\textit{lriit} are also the same. Nominals of course normally have third-person reference. Once the nominalizations came to be used as predicates, first- and second-person forms were apparently created with the pronominal suffixes used on indicatives: \textit{alarte-\textit{lria-nga}} ‘I made a mistake’ (\textit{err-INTR.PART-1SG}).

Intransitive participial verbs also show the same formal idiosyncrasies as nouns formed with this nominalizer. After verb bases ending in -te-, the participial has a suppletive form -\textit{ngur}. The final vowel \textit{e} of the base is dropped, the \textit{t} of some bases shifts to \textit{s}, and that of other bases shifts to \textit{l}. Yup’ik contains another nominalizer -\textit{ngur} with essentially the same meaning as -\textit{lria}, but it appears only after verbs ending in -te-, \textit{mikete} ‘to be small’, \textit{mikel-nguq} ‘little one, child’ (Jacobson 1984:519). This nominalizer shows the same combinatorial behavior as the homophonous intransitive participial: the final vowel \textit{e} of the preceding base is dropped, the \textit{t} of some bases is spirantized to \textit{s} (the same set of bases that trigger this change before the participial), and the \textit{t} of others becomes \textit{l} (again the same set as with the participial). Though the -\textit{ngur} nominalizer occurs only after bases ending in -te-, the -\textit{lria} nominalizer sometimes occurs in the same context, as in the example above.

Fortescue and colleagues (1994:408–9) tentatively link the Yup’ik suffix -\textit{lria} to a Proto-Eskimoan nominalizer *\textit{Lria}. Probable cognates function as nominalizers throughout the family, in all subbranches of Eskimoan and in Aleut (in the nominalizer
 Reflexives serve as participials only in the Yup'ik-Sireniki branch of Eskimoan, however.

A similar history is behind the transitive participial mood suffix. A nominalizer -ke appears in Yup'ik and other languages throughout the family. It forms nouns referring to the absolutive argument of transitive verb stems. Fortescue and colleagues reconstruct, for example, a Proto-Eskimoan noun *uwo- ‘boiled food’, from the root *uwo- ‘be heated up or cooked’ plus the Proto-Eskimoan nominalizer *-ka (1994:561). Some Yup'ik examples are given in 57.

(57) Yup'ik nominalizer -ke (Jacobson 1984:465)

a. atuqeka
   atur-le-ka
   use-NMZ-1sg/3sg
   ‘my used one’ = ‘the one I am using’

b. Elliu
   iriama enugiman.
   ell-le inun
   put-OPT.1sg/3sg child-1sg/3sg be.unable.to.reach-NMZ-3sg/PL.ALL
   ‘Put it out of my child’s reach.’

The transitive participial mood suffix shares not just its basic form but also phonological idiosyncrasies with this nominalizer. As Jacobson notes in his 1984 Yup'ik dictionary, before both suffixes, (i) the final consonant of a preceding stem is dropped, (ii) the final e of a preceding stem is dropped, and (iii) a preceding i changes to s.

The semantic link between nominalizers and participials is clear as well. Nominalized verbs and clauses, set in apposition to other nominals, can function as relative clauses, like ‘ones which are white’ below. They add supplementary descriptive information.

(58) Yup'ik attributive constructions: appositive nominals (George Charles)

Qatlria mek tunu mek pingelliniirt.
qater-lria-mek tunu-mek pi-nge-llini-irrt
be.white-ABL back-ABL do.acquire-apparently-INTR.PART-3pl
‘They apparently have white backs.’

ORIGIN OF THE SUBORDINATIVE MOOD MARKER. The diachronic source of the modern subordinative mood suffix is more obscure. (Cognates of the mood marker in other Eskimo-Aleut languages are termed variously the subordinative, appositional, infinitive, conjunctive, and contemporative. The term ‘contemporative’ is used for different moods in Yup’ik.) Fortescue and colleagues reconstruct a Proto-Eskimo-Aleut nominalizer *-lu(r) ‘place or thing for performing action X’ (1994:408). It is no longer productive in any of the languages, but it still appears throughout the family in old nouns, many of which begin with forms similar to those of verb roots.

(59) Some old Yup'ik nouns and verbs (Jacobson 1984)

<table>
<thead>
<tr>
<th>Yup’ik</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>tam-lu</td>
<td>‘chin’</td>
</tr>
<tr>
<td>kum-lu</td>
<td>‘thumb’</td>
</tr>
<tr>
<td>u-lu</td>
<td>‘tongue’</td>
</tr>
<tr>
<td>a-lu</td>
<td>‘sole of foot, boot, shoe’</td>
</tr>
</tbody>
</table>

The nominalizer survives even in Aleut, representing the other branch of the Eskimo-Aleut family, in such terms as camlu- ‘chin’, ayalug- ‘tooth’, and kalyug- ‘heel’ (Fortescue et al. 1994:408), as well as others such as aluluk- ‘cape’ (atul- ‘to go down to shore’), chakuluk- ‘bay’ (chaxa- ‘depression’), and alaguluk- ‘breakers’ (alilug- ‘sea’) (Bergsland 1994:527).
Some of the pronominal suffixes that appear with the Yup’ik subordinative are the same as those used with the indicative, but others are different. The third-person singular is -q with indicatives but -ni with intransitive subordinatives. (Under an alternative analysis preferred by some Eskimologists the q is part of the preceding indicative suffix and the third-person singular pronominal is zero. This analysis has no effect on the argument here.) The third-person intransitive subordinative endings match those on possessed absolutive nouns, where the possessor is coreferential (R) with the subject of the clause, as in ‘he beached his own boat’.

(60) Yup’ik third-person subordinative and possessed absolutive endings

| Gender | Subordinative | Possessive
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3R.SG</td>
<td>ayag-lu-qi</td>
<td>angya-qi ‘his/her own boat’</td>
</tr>
<tr>
<td>3R.DU</td>
<td>ayag-lu-tek</td>
<td>angya-tek ‘their (dual) own boat’</td>
</tr>
<tr>
<td>3R.PL</td>
<td>ayag-lu-teng</td>
<td>angya-teng ‘their (plural) own boat’</td>
</tr>
</tbody>
</table>

The first-person subordinative endings match those of possessed ergative nouns, minus the ergative marker -m:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Subordinative</th>
</tr>
</thead>
<tbody>
<tr>
<td>3R.SG</td>
<td>ayag-lu-qa</td>
</tr>
<tr>
<td>3R.DU</td>
<td>ayag-lu-tek</td>
</tr>
<tr>
<td>3R.PL</td>
<td>ayag-lu-teng</td>
</tr>
</tbody>
</table>

The second-person subordinative endings match the indicative endings:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Subordinative</th>
</tr>
</thead>
<tbody>
<tr>
<td>3R.SG</td>
<td>ayag-lu-ten</td>
</tr>
<tr>
<td>3R.DU</td>
<td>ayag-lu-tek</td>
</tr>
<tr>
<td>3R.PL</td>
<td>ayag-lu-teng</td>
</tr>
</tbody>
</table>

These patterns go back to Proto-Eskimoan (Fortescue et al. 1994:441–48).

2.4. INTERIM SUMMARY: CENTRAL ALASKAN YUP’IK. Like Navajo, Yup’ik shows the functional extension of markers of syntactic dependency within the sentence into larger discourse and pragmatic domains. While evidence of just one such development can be seen in Navajo, evidence of at least two can be seen in Yup’ik. The discourse functions of the Navajo adverbializer /go and the Yup’ik autonomous participial are quite similar. Both mark supplementary information that is not part of the storyline, material that sets the scene in narrative, contributes commentary or explanation, provides emotional evaluation, and so forth. In this sense they both signal subordination. The discourse function of the Yup’ik autonomous subordinative is different: it links sets of closely related subevents that the speaker wishes to package together as elements of a larger unit. It marks dependency within a larger context but not necessarily subordination. In all cases, the discourse uses of the markers can be seen to continue their earlier syntactic functions within the sentence, but in a larger domain.

3. THE CROSSLINGUISTIC Pervasiveness of the Phenomenon. The use of grammatically dependent clause structures as independent sentences is actually not as rare cross-linguistically as might be thought.

3.1. Barbanero. Barbanero Chumash, a language of the Chumashan family of the California coast, shows extensive use of nominalized clauses as independent sentences in discourse (Mithun 2002). A nominalizing prefix *al-, originally used as a device for deriving nouns like *al-ishaw ‘sun’ from the verb ishaw ‘to be hot’, was apparently extended to clauses, where it formed relative clause constructions similar to those formed with nominalizers in Navajo and Yup’ik. The nominalizer was then extended to independent sentences to mark their roles in providing additional information in discourse: background, circumstances setting a scene, supplementary description, elaboration, and explanation. These uses are remarkably similar to those of the Navajo /go sentences and the Yup’ik autonomous participials.
3.2. Hualapai. A similar development can be seen in the Yuman family of the American Southwest, a family completely unrelated to Athabaskan, Eskimo-Aleut, or Chumashan. The Yuman languages are known for what has sometimes been termed ‘switch reference’. The marker -k ‘same’ can be seen in 61 from Hualapai (= Walapai), and the marker -m ‘different’ in 62.

(61) Hualapai -k ‘same’ (Winter 1998:16)

\[\text{ka-k} \quad \text{ke} \quad \text{-m-wa:-m-k} \quad \text{-m-tu}\]

\text{INDEF-LOC INDEF 1.OBJ-2.SUBJ-take-DIST-SAME 2.OBJ-1.SUBJ-burn}

\text{m-t'opa.}

\text{2-PACT-blood}

‘Do not take me somewhere and burn me.’

(62) Hualapai -m ‘different’ (Winter 1998:9)

\[\text{n˜-ha-m} \quad \text{ya:m-} \quad \text{matwi-ta-l} \quad \text{m-wa’}.

\text{INTENS-ANA-ABL CONC-leave-DIFFERENT land-AUG-in 2-sit}

‘When [the others] have left from here, you stay in Meriwitica [Canyon].’

The ‘same’ marker -k links clauses representing closely related events to sentences representing a higher-level event or situation. The ‘different’ marker -m links clauses representing less closely related events or states. Clauses grouped together with the -k marker typically share the same subject (and thus the label ‘switch reference’), but not always. This syntactic use of the markers appears in all languages of the family (Jacobson 1967, Langdon 1970, Kendall 1975, Winter 1976, Yamamoto 1976, Slater 1977, Langdon & Munro 1979, Redden 1980, Munro 1981, Hardy 1982, Gordon 1983, Hinton 1984, Miller 1992, Mithun 2005).

In one branch of the family, the markers do more. An examination of connected Hualapai speech in the twenty-one texts recorded in 1956 by Winter (Winter 1998) reveals that the vast majority of clauses carry one of these markers, including many translated as independent sentences. One text, for example, told by Tim McGee (Winter 1998:49–51), shows a total of thirty-seven clauses, of which twenty-seven (73%) carry a ‘same’ or ‘different’ marker. The text is arranged into twenty-six independent sentences, of which nineteen (70.3%) carry a marker. A larger survey of nine of the texts shows that 699 of 1,005 verbs (69%) end in a ‘same’ or ‘different’ marker. The two markers are obviously no longer restricted to marking syntactic dependency of clauses within sentences.

The functions of these markers have been extended to marking relations of full sentences to each other in larger discourse contexts, providing a higher-level chunking of experience into events. The text by Tim McGee mentioned above opens with a set of independent sentences, each linked to the following with the ‘same’ ending -k: ‘A man and a woman were living together (same). The two of them lived somewhere (same). From there they went away (same).’ The next two sentences carry no linking suffix: ‘They came to Peach Springs. They came to Blue Mountain.’ This is not surprising, given the shift in perspective signaled by the sentences that follow: ‘ ‘You carry a big olla on your head. There will be no water for us to drink,’ the man said.’ A few lines later, sentences are linked with the ‘different’ marker: ‘My coyote shawl was torn (different); the brush tore it (different). He scolded me (different).’ The narrative concludes: ‘We went on from there (same). My shawl was torn (different); he kept scolding me (different). I was just ashamed all the time (same).’ As in all of the texts, the final sentence contains no linking marker: ‘At last we came back home.’

Here, as in Athabaskan and Eskimoan, comparative evidence allows us to trace the direction of development of the markers. They originated as case suffixes on nouns.
In all of the languages of the Yuman family, the -k ‘same’ marker has the same shape as the locative/allative case suffix -m (reminiscent of the Navajo adverbializer and Yup’ik subordinative). In all of the Yuman languages, the -m ‘different’ marker matches the ablative/instrumental/comitative case suffix -m. The use of these suffixes to mark both case on nouns and syntactic dependency on clauses can thus be reconstructed for Proto-Yuman. Their functional extension to marking relationships beyond the sentence, however, is an innovation found only in the Pai branch of the family, immediately visible in texts from each of the languages in that subgroup: Hualapai (Winter 1998), Havasupai (Hinton 1984), Yavapai (Kendall & Sloane 1976), and Paipai (Joel 1976).

3.3. Woods Cree. Similar phenomena can be seen in Cree, a Central Algonquian language of the Algonquian family, spoken across northern North America from Labrador westward into Alberta. At least two major inflectional paradigms have long been recognized, usually termed the independent order and the conjunct order. The independent order has traditionally been associated with independent or matrix clauses, and the conjunct order with dependent or subordinate clauses. When one examines unscripted connected speech, however, it becomes apparent that the conjunct order is not restricted to syntactically subordinate clauses in the strict sense.

Starks (1994) compared the occurrence of independent and conjunct order clauses in conversation and narrative in Woods Cree. She found that her samples of both conversation and narrative contain more conjunct-order verbs in main clauses than independent-order verbs, with the greatest density of conjunct verbs in narrative.

(63) Woods Cree main clause verbs: Starks 1994

<table>
<thead>
<tr>
<th></th>
<th>Conversation</th>
<th>Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent order</td>
<td>45%</td>
<td>23%</td>
</tr>
<tr>
<td>Conjunct order</td>
<td>48%</td>
<td>75%</td>
</tr>
</tbody>
</table>

She reports that in Woods Cree narrative, independent verbs often denote events and situations outside the storyline, as well as evaluation after the conclusion. Conjunct verbs are used for the main, sequenced events that move the narrative along. In conversation, independent verbs are used for statements not considered integral to the topic under discussion, remarks considered inconsequential or secondary and not pursued further, and abrupt shifts in topic. These uses of the conjunct are reminiscent of those of the Yup’ik subordinative. The use of conjunct-order verbs in independent sentences is not new. It is pervasive in the Plains Cree texts recorded by Bloomfield (1934). Buszard-Welcher (2003) describes similar functions among orders in Potawatomi, another Central Algonquian language.

3.4. Khalkha Mongolian. Dependency markers with scope over more material than the equivalents of literary English syntactic sentences are by no means restricted to North America. They are also common in a number of Asian languages, for example. Khalkha Mongolian speech, like that of many other languages in the area, shows clause chains consisting of long strings of nonfinite clauses before a final finite clause. Often the material in such constructions would be expressed in multiple independent sentences in other languages. The sentence below was part of a description of the Pear Film, a film without dialogue developed by Chafe (1980) and his collaborators to compare ways in which speakers of different languages package information. The lines in the example are arranged into clauses. Nonfinite verbal inflections are in bold. The only finite verb is the last one, ‘it looked like’.

THE EXTENSION OF DEPENDENCY BEYOND THE SENTENCE 101
Then when the child with the bicycle was about to pass by, having seen the man collecting the pears, the child stealing the pears, it looked like.'

Many Khalkha nonfinite suffixes are transparently descended from nominalizations, some followed by the same markers as those used for oblique cases on nouns (Poppe 1974:178–79). Temporal ‘when’ clauses are formed with the locative case ending; ‘after’ or ‘in consequence of clauses’ are formed with the ablative case ending; simultaneous ‘when’ clauses are formed with the comitative case ending; reason clauses are formed with the instrumental case ending. The adverbial clauses formed with the locative are reminiscent of the Navajo clauses and the Yup’ik subordinative clauses. An example of a Khalkha reason clause formed with the instrumental is in line 5 of example 64 above, which ends in -oor translated ‘since’.

A particularly common Khalkha nonfinite ending is -aad, visible in the second line of 64. This form is termed the converbum perfecti by Poppe, who characterizes its meaning as follows. ‘The converbum perfecti expresses an action completed before the main action starts, e.g., “he did and . . .”; “after doing . . .”’ (1974:97). In some contexts, clauses with this verb form are not obviously dependent semantically or prosodically on any finite matrix clause. The sequence in 65 opened the Pear Film narrative.

‘It is morning. A rooster is crowing.’

The two clauses were pronounced with intonation typical of independent sentences, each ending in a terminal contour with a full fall in pitch followed by a significant pause (0.975, 1.904 seconds respectively) before the following sentence, which began with a pitch reset. A pitch trace can be seen in Figure 4. Evidence of cycles of development of nominalized clauses coming into use as independent sentences can be seen in Mongolian as well. In modern spoken Khalkha, the common past-tense suffix -sa, the habitual -dag, and the continuative -qaa, for example, are still used as nominalizers and in the formation of relative clauses. Their modern use as finite verbs does not appear to be the result of direct extension, however. They appear in compound tense formations, as complements of a finite verb ‘be’ or ‘become’. In colloquial speech, these auxiliary verbs are now often omitted.

3.5. Sanskrit. Similar patterns can be seen in other languages in the area. Brian Joseph (p.c.) points out, for example, clause chains consisting of series of gerunds in
Sanskrit, similar to converbs or coverbs in some other grammatical traditions. These clauses cannot stand alone, but can often be translated as independent sentences in a sequence of actions: ‘Having gotten up, and brushed my teeth, I got dressed’ or ‘I got up. I brushed my teeth. I got dressed’. The Sanskrit gerunds, usually ending in -tva¯ (go-tva¯ ‘while going’), are reconstructed as instrumental case forms of deverbal nouns (from a nominalizer -tu- followed by instrumental -a¯).

Erdenebaatar Erdene-Ochir (p.c.) and Nicolas Tournard (p.c.) note similar constructions in Tibetan.

3.6. JAPANESE. Iwasaki (1993, 2000) provides a detailed and insightful description of the extension of dependent clause forms to use as independent sentences in Japanese. Citing Kojiki 1967, Otose 1982, Kobayashi 1987, and Yamaguchi 1987, he reports that in Japanese of the Heian period (circa ninth through twelfth centuries), verbs and auxiliaries in declarative sentences were inflected either as finite forms with -keri or as attributive forms with -keru. The attributive forms were the same as those used in relative clauses. The use of attributive forms in main clauses had three distinct functions: (i) background information, (ii) exclamation, and (iii) weak conjecture (Iwasaki 2000: 237).

The first use is found in prose, and the second and third in poetry. Modern Japanese shows a similar discourse device, but it involves different morphology. In Middle Japanese the formal distinction between the finite and attributive forms disappeared as a result of phonological change. It was subsequently renewed, however, with a new contrast between bare predicate sentences and nominalized sentences containing the formal noun no or sake followed by a predicate formative word such as da or desu. Iwasaki notes that the modern nominalized sentences are characterized as having an explanatory flavor, ‘expressing the background for some facts’ (Alfonso 1966, Kuno 1971, Yoshida 1988, cited in Iwasaki 1993:25). More is said about Iwasaki’s work in the next section.

3.7. ENGLISH. Phenomena like those seen so far may not be as exotic as they first seem. The passage in 66 comes from an essay written by an American undergraduate. The punctuation is nonstandard but not random. It shows higher-level groupings of ideas reminiscent of those just seen in languages of North American and Asia. At the beginning, multiple syntactic sentences are grouped together by commas. These larger
units are then closed with periods. At the end, a formally dependent clause is marked as an independent sentence on its own with a period.

(66) Undergraduate writing sample

College is a life-changing experience, upon entering, plans are expected to be fulfilled but there is a lot more to it than what the average freshman expects. My family owns their own business and my sisters and I are workers in the business; throughout high school and college we have been involved in going home on weekends and helping with the business. Besides this job I was also employed in a work-study job at college while completing my undergraduate work, I had to work on campus to make ends meet. . . . For my previous research I concentrated on films made during the golden age and want to stay on this track for any future work. Although later I do want to work with contemporary cinema.

3.8. METHODOLOGICAL CONSIDERATIONS. Processes of extension beyond the sentence are undoubtedly more common crosslinguistically than has hitherto been recognized, perhaps due in part to traditional methodologies that have focused on the sentence as the domain of grammatical structure. As long as our descriptions of structure are based primarily on independent sentences constructed in isolation, or on translations of such sentences from standard contact languages, it can be easy to miss larger patterns. When longer stretches of unscripted connected speech are examined, in their communicative context, higher-level structures are more likely to appear. Differences among genres, registers, and speakers also become more evident. The structures seen here show variation along all of these dimensions. Discourse use of the Navajo go construction, for example, like that of the Woods Cree conjunct, tends to be more frequent in narrative, where speakers can structure longer stretches of speech, than in rapid repartee. Special politeness uses of the Yup‘ik subordinative, by contrast, are more obvious in conversation than in narrative. Formal written English is generally characterized by sequences of clearly delineated, finite independent sentences in a way that informal spoken English is not. Variation can even be seen among speakers in their exploitation of discourse-structuring devices like those seen here. Native speakers generally show little variation in their choices of allomorphs, for example, but considerable variation can be seen in choices among structural alternatives in discourse. Highly skilled, articulate speakers often have a wider array of rhetorical alternatives at their disposal and exploit them for more elaborate structuring of their messages than less artful speakers.

4. THE MECHANISMS OF CHANGE. Dependent clause structures can grow into independent sentence structures through a variety of mechanisms. We know that it is not uncommon for complex sentence structures to collapse over time into simple sentences (Harris & Campbell 1995:151–94). Certain matrix verbs can erode into auxiliaries, particles, clitics, and affixes that mark tense, aspect, mood, negation, evidentiality, and more. The original dependent morphology of their complement clauses may remain. This process may underlie certain constructions in the Tsimshianic languages of the Northwest Coast of North America. These languages show extensive use of dependent structures as independent sentences. Boas describes it as follows:

By far the most common form is the subjunctive. All historical prose, every sentence that does not express the speaker’s own immediate experience, is expressed in this mode . . . On account of the
tendency of the Tsimshian language to express all narrative in the subjunctive mood, indicative forms are quite rare, and occur almost only in statements of self-experienced facts. (1911:399, 404).

Some of the modern uses of the subjunctive are the result of a historical process of clause fusion. Basic Tsimshianic clause structure is predicate-initial. Lexical arguments are preceded by a clitic, called a connector, which is attached phonologically to the word before the argument. The connectors, like the Gitksan =hl below, distinguish such features as common versus proper nouns, and sometimes case.

(67) Gitksan (Tsimshianic) simple sentence
Hadixxl
hat-3xs =1
swim = CONNECTOR.COMMON man-DIST
'The man swam.'

Gitksan complement clauses are introduced by the same connector =hl. The complement clauses are in what is called the subordinate or dependent mode, distinguished by constituent order and connective marking. This mode is also used in what appear to be independent sentences in certain aspects such as the progressive.

(68) Gitksan progressive
Yukwhl
t'an.
yuk = 1
PROG = CONNECTOR.COMMON sit-2SG
'You're sitting.'

The diachronic source of the modern progressive marker is traced to a verb that originally served as the matrix of complex sentences (Rigsby 1986:363). The subordinate or dependent mode is used in numerous other sentence types as well, identifiable by their initial elements, among them various other aspects, all negatives, and certain discourse particles. Some of these constructions still show a connector, while others do not. This particular path of development, however, while quite common across languages, does not appear to be the one underlying the Navajo or Yup’ik dependent structures. The Navajo and Yup’ik structures contain no evidence of an erstwhile matrix verb that has been reduced.

A slightly different mechanism is described for Carib languages by Gildea (1997, 1998). Gildea identifies two clause constructions in the modern Carib languages that are descended from complex sentences with nominalized complements. He hypothesizes that one originated in copular sentences of the form It will be [the city’s destruction by the enemy]. Here the postposition and nominalizer were reanalyzed together as a tense marker. The other originated in copular sentences with a nominalized sentential object of a postposition: He is on [the destruction of the city]. Such processes also do not appear to underlie the Navajo or Yup’ik dependent structures discussed here, since they do not contain specific tense markers of this type.

A far-reaching discussion of the autonomous use of dependent forms crosslinguistically is in Evans 2007. Evans coins the term insubordination to refer to ‘the conventionalized independent (main-clause) use of formally subordinate clauses’. He draws on material from a vast array of languages, including English, German, Dutch, Icelandic, Latin, French, Italian, Spanish, Polish, Lithuanian, Latvian, Estonian, Basque, Modern Hebrew, Amharic, Ewe, Tubari, Arrernte, Dyirbal, Western Desert, Yukulta, Ngiyambaa, Gooniyandi, Kayardild, Ngandi, Rembarrnga, Indonesian, Mon, Chinese, and Japa-
nese. He explicitly excludes cases like the two types described above in which traces remain of an original matrix verb or copula:

My definition also requires that the resultant construction draw its material from only the old subordinate clause. This is to distinguish it from cases of clause union which end up including elements of an erstwhile subordinate clause (e.g. participial forms, or a causativizing verb root) in addition to elements of the erstwhile main clause (e.g. an auxiliary, or a causativizing element). . . . Also excluded are cases where former main verbs are reduced to particles or suffixes to an erstwhile subordinate verb which has become the new main verb. (2007:373)

Evans traces the development of his insubordinate constructions to the ellipsis of a matrix clause. Differences in function among the various types of insubordinate constructions are attributed to the different matrix clauses that have been omitted.

- Indirection and interpersonal control
  Constructions: imperatives, hints, requests, permissives, warnings, threats
  Origins: ellipsis of predicates of desire, permission, ordering, enablement, etc.
- Modality
  Constructions: evidentials, hortatives, deverbatives, exclamations, evaluations
  Origins: ellipsis of predicates of reporting, thinking, perceiving, asserting, emotion, evaluation
- Presupposition
  Constructions: negation, focus, contrast, disagreement
  Origins: ellipsis of markers of cleft constructions

The unstated matrix analysis is certainly a reasonable hypothesis about the source of some of the constructions discussed by Evans. It might be invoked to account for some Yup’ik constructions as well, such as subordinative requests. The Yup’ik request in 69, addressed by the speaker to his mother, contains the overt matrix clause ‘I’m asking you’.

(69) Yup’ik subordinative command (George Charles)

No, qanemci-vke-na
k’ tua-i aptamken
no qanemci-vke-na-ku
tuai apete-a-ken
no tell.story-NEG-SUBORD-3/3SG then ask.TR;INSRC-1SG/2SG
‘No, please don’t tell a story; I’m asking you.’

The Yup’ik request seen in the Moosehant text earlier consists of a subordinative without a matrix clause. (The subordinative verbs in both 69 and 70 have the form -na- because they are in negative clauses.) One could analyze it as containing an unstated performative matrix like that in 69.

(70) Yup’ik subordinative command (Elena Charles)

Ilangci-vkenalck
llangci-vke-na-kek
pay attention.to-not-SUBORD-2/3DU
‘Don’t pay any attention to them!’

In Gitksan (Thimshianic), a conventionalized complement construction is used for polite imperatives. The complement clause is in the dependent mode, as would be expected.

(71) Gitksan polite imperative (Rigsby 1986:313)

Amlh
dim t’a:n!
am=1
tim t’a:n
good = CONNECTOR;COMMON PUT sit-2SG
‘It will be good that you sit’. = ‘Please sit down.’
Basic imperatives have the same subordinate form without the matrix clause: *T’an!* ‘Sit down!’ (Rigsby 1986:309). For Western Apache, de Reuse and Goode propose a somewhat similar history behind the use of =*go* on progressive commands: *hígíñgo* ‘You are walking (and that would be good)’ > *‘Walk!’* (2006:344).

But most of the Navajo and Yup’ik constructions discussed earlier are not easily explained by an ellipsis account either, for several reasons. One is that most of them originated as adverbial (adjunct) constructions rather than complements like those discussed by Evans. A second pertains to their functions. The functions of Evans’s inordinate constructions are generally confined to the domain of the marked sentence itself and the missing matrix. The Navajo and Yup’ik markers operate over larger stretches of discourse. The Navajo =*go*, the Yup’ik autonomous participial =*łău*, and the Barbareño Chumash *-ta:l*-mark material off the main line of events in a stretch of narrative; they relate sentences to a larger discourse or pragmatic context. The Yup’ik autonomous subordinative, the Hualapai ‘same’/’different’ markers, and the Cree conjunct mode link together series of sentences representing subevents of a larger event or episode, or ideas pertinent to an overarching topic of discussion, rather than to a specific unstated matrix clause. They are dependent but not necessarily subordinate in the way that complement clauses might be. They are also exploited for various social functions by relating comments, questions, responses, and commands to the larger social situation. Speakers can show respect by marking their own contributions as pertinent to those of previous speakers, showing dependency across turns in conversation. They can save face by portraying their comments as incidental to the general topic of conversation, in case they are not taken up in further discussion.

Mechanisms by which these dependency markers are extended beyond the sentence are in a sense more abstract than the deletion of a specific matrix clause. It is not unreasonable to imagine that syntactically subordinate clause forms might come to be identified as less assertive than main clause forms. Speakers might then begin to select them in certain contexts for that implication. There need never have been a specific matrix clause that was omitted.

Iwasaki (1993, 2000) describes the development of the Japanese constructions seen in the previous section in terms of illocutionary force. Discussing the earlier use of attributive forms as main clauses for background information, exclamation, and weak conjecture, he argues that ‘all three are consequences of a single functional feature of the attributive form used in the final-attributive’, which he identifies as ‘suppressed assertion’. ‘In narrative prose, ‘suppressed assertion’ is employed to indicate the dependent, background nature of a sentence in relation to foreground conclusive sentences in textual structure’ (2000:235–36). Furthermore, ‘Final-attributive and focus concord contain discourse-presupposed, or non-challengeable, information and present background information in narrative, in opposition to the conclusive sentence, which presents foreground information’ (2000:264). The later use of nominalized clauses in Japanese for background information and explanation is understood in the same way. Similar mechanisms could underlie the development of the Navajo =*go*, Yup’ik participial, and Barbareño *-ta:l*-autonomous constructions, in both their narrative and social functions. There need never have been a specific matrix verb.

The extension of the Yup’ik subordinative and Hualapai ‘same’/’different’ markers would involve a slightly different kind of functional generalization. On the syntactic level, they package together subparts of a single event; on the discourse level, they package together lower-order events into higher-order events.
This direction of development might raise questions about a proposed principle of possible diachronic change. There is now a rich literature on processes of change grouped under the term 'grammaticalization', by which larger, looser structures are reduced to smaller, tighter ones. There is also a substantial literature on the issue of whether such processes are unidirectional (Lehmann 1995 [1982]:16–19, Newmeyer 1998, Haspelmath 2004, Heine & Kuteva 2007, and many others). At first glance, the Navajo, Yup’ik, Barabareño Chumash, Hualapai, Cree, Khalkha, and Japanese developments discussed here might seem to constitute counterevidence to hypotheses of unidirectionality. Closer consideration indicates that they are simply the result of a different kind of process.

Processes of extension are well known in the literature on grammatical change. (See, for example, Harris & Campbell 1995:Ch. 5). It has long been recognized that nominalizers are often extended from the domain of word formation to syntax, that is, from forming nouns to forming clauses that function like nouns (Heine & Kuteva 2007: Ch. 5). We saw the results of such extension in both Navajo and Yup’ik. The extension of markers to functions at levels beyond the sentence is now beginning to be recognized as well. Tabor and Traugott (1998) examine several examples of scope increase in English. One is the shift of the possessive ‘s from a noun suffix to a noun phrase clitic.

A second is the development of a nominalizer -ing with scope over verbs alone (John’s constant reading of magazines) into a gerund with scope over full verb phrases (John’s constantly reading magazines). A third is the development of adverbs from verb modifiers into sentence modifiers and, in some cases, further into discourse markers. As an example they trace the history of English anyway. There is in fact a large and growing literature on the development of individual lexical items into discourse markers, including Romaine & Lange 1991, Fludernik 1995, Onodera 1995, Brinton 1996, 2001, Liu 1997, Manoliu 2000, Traugott & Dasher 2002 (especially chapter 4), Walterreit 2002, Traugott 2003, and others.

The development of lexical items into discourse markers has taken place in the languages examined here as well. One of the most common discourse connectors in Khalkha Mongolian is tegeed ‘so then’, seen at the beginning of 64. This word is still transparently a verb morphologically, consisting of the verb root teg- ‘do so’ plus the converb perfect infinitive ending described earlier. The form is thus literally ‘having done so’, but this word is no longer thought of as a predicate denoting a specific action done by a particular person. It shows the kinds of characteristics associated with the various processes classified as grammaticalization: blurring of internal structure, deca
tegorization, semantic abstraction and generalization, and phonological reduction. The marker itself abides by the definition of grammaticalization proposed by Haspelmath as ‘a diachronic change by which the parts of a constructional schema come to have stronger internal dependencies’ (2004:26). At the same time, its new use shows functional extension in the sense that it ties what follows it, typically an independent sentence, to previous discourse. Extension is not the opposite of any grammaticalization processes; it is simply a different kind of process. The two can even cooccur, as in the development of the Khalkha discourse marker tegeed ‘so then’.

5. EXPLANATORY REWARDS. We have seen how patterns of grammatical dependency can be extended from the sentence into larger discourse and pragmatic domains. What originated as syntactically dependent clause structures can come to be used as independent sentences. At a certain point, they can compete with older independent sentence structures. Such developments can in turn have secondary effects on morphological
and syntactic structure within the clause. An awareness of the existence of these processes and their potential effects can help us to understand some seemingly arbitrary but recurring arrays of structural patterns. Two such phenomena are examined briefly here: homophonies among certain grammatical markers, and certain ergative/accusative splits.

5.1. HOMOPHONOUS GRAMMATICAL MARKERS. Sadock 1999 traces the history of a traditional mystery in Eskimoan syntax. Eskimologists have long noticed the structural similarity between indicative clauses and noun phrases. Both show a combination of head marking and dependent marking. In clauses, grammatical relations are marked on both arguments and predicates. Nouns carry case suffixes: ergative, absolutive, locative, ablative, allative, viusal, or equational. Verbs carry pronominal suffixes identifying core arguments (Mithun 2003). In the Yup’ik sentence in 72, the agent noun Pangalria ends in the ergative case suffix -m. The verb ‘fetch’ ends in the transitive pronominal suffix -i ‘he/them’.

(72) Yup’ik head and dependent argument marking in clauses (Elena Charles)

Pangalria- m aqva-lru-a-i

name-ERG fetch-PASS-TR.INDIC-3SG/3PL

‘Pangalria came and got them.’

In possessive constructions, the possessive relation is marked on both the possessor and the possessed. In 73 the possessor Pangalria carries the genitive case suffix -m. The possessed noun ‘relative, kinsman’ carries a suffix -i identifying the possessor and the possessed (which is always third person).

(73) Yup’ik possession (Elena Charles)
Pangalria- m ila-i

name-GEN relative-3SG/PL

‘Pangalria’s relatives’

Looking back at 72 and 73, one sees that the suffixes in the clause and those in the possessed noun phrase have exactly the same shapes. In 1911 Thalbitzer proposed that Greenlandic Eskimo (Kalaallisut) actually has no verbs: speakers speak entirely in nouns:

We get the impression that to the Eskimo mind the nominal concept of the phenomena of life is predominant. The verbal idea has not emancipated itself from the idea of things which may be owned, or which are substantial. (Thalbitzer 1911:1059, discussed in Sadock 1999)

Few if any modern Eskimologists share this view. Indeed, Woodbury 1985 demonstrates definitively that the language does contain verbs. But the formal similarity between the clausal and possessive structures is unlikely to be due to chance.

One way of accounting for the similarity might be in terms of synchronic derivation. Johns (1992) illustrates such an account with the sentence in 74 from Inuktitut (Canadian Eskimo). (The ergative case is traditionally termed the ‘relative’ among Eskimologists.)

(74) Inuktitut (Johns 1992:61)

Anguti-up nanaq kapi-ja-a-th

man-PASS. be-STAB PAST-TR.INDIC-3SG/3SG

‘The man stabbed the bear.’

Johns posits a D-structure essentially equivalent to ‘The bear is the man’s stabbed one’, then derives the surface form in 74 in three stages. Step 1 is the combination of the
root ‘stab’ with the passive participial suffix to form the nominal ‘the stabbed one’, a lexical operation. Step 2 is the formation of a possessive phrase ‘the man’s stabbed one’ (AgrPN). Step 3 is movement of the verbal noun ‘the stabbed one’ first to AgrN and then to AgrV. Grammatical markers that appear as homophones on the surface (the nominalizer and the participial mood, the ergative and genitive cases, and the possessive and transitive nominal endings) are thus viewed as derived from the same elements at D-structure.

An alternative account would explain the homophony as a result of history. The Inuktitut and Yup’ik patterns are essentially parallel. As seen in §2.3, two of the Yup’ik dependent clause structures, the participial and the subordinative, originated as nominalized clauses with arguments coded as possessors, something like the English ‘my telephoning them’ or ‘your fetching us’. Both dependent structures are now used as independent sentences for specific discourse purposes, in competition with the older indicatives, but they have preserved their earlier nominalized forms.

The modern indicative apparently developed by a similar route. Yup’ik contains a nominalizer -(g)aq/-g(a)r that designates the semantic patient of transitive bases, something like the suffix -ee of English employ-ee.

(75) Yup’ik nominalizer -(g)aq/-g(a)r: ‘that which has been V-ed’
    aqar- ‘to wash’
    (Jacobson 1984:431)
    aqar-aq ‘that which has been washed, laundered article of clothing’

The nominalizer shows certain special phonological behaviors. When it is added to a verb base ending in two vowels, a velar fricative g appears. When it is added to a base ending in a consonant, the consonant is retained. When it is added to a base ending in the sequence VC-, the C is geminated. This nominalizer is traced back by Fortescue and colleagues (1994:443) to a Proto-Eskimoan nominalizer *-Lа- with the same meaning, ‘that which has been V-ed’.

Nouns formed with this nominalizer can appear with possessive suffixes, just like other nouns.

(76) Yup’ik derived noun with possessor (George Charles)
    аqairаnka
    aqair-ir-gar-ntка
    dir-remove-rcz:IsAg1r
    ‘my laundered things’ = ‘things I washed’

The Yup’ik transitive indicative mood suffix has exactly the same shape -(g)aq/-g(a)r- and the same complex phonological behavior as the nominalizer. Furthermore, the pronominal suffixes on indicative verbs have the same shapes as the possessive suffixes on nominals. The verb ‘I am washing them’ is thus homophonous with the nominal ‘my washed things’.

(77) Yup’ik transitive indicative verb (George Charles)
    аqairаnka
    aqair-ir-gar-ntka
    dir-remove-rcz:rcz:IsAg1r
    ‘I am washing them’

As noted earlier, the ergative and genitive cases on nouns match as well. Absolutives are unmarked. The full sentence ‘The man washed them’ thus has exactly the same form as the possessed nominal ‘the man’s clean laundry’.
The modern indicative construction apparently developed from a nominalized dependent clause construction by the same processes of extension into discourse and subsequent competition with an earlier indicative that we see underway today with the partical and the subordinative.

5.2. ERGATIVE/ACCUSATIVE SPLITS. Much has been learned about the combinations of case patterns (alignment types) that occur crosslinguistically. We often find nominative/accusative pronominal systems alongside ergative/absolutive noun case suffixes within the same language. We find accusative patterns in imperfective clauses alongside ergative patterns in perfective clauses. Some combinations can be explained in terms of the processes by which one of the patterns develops and first enters the grammar. A good survey of such processes is in chapter 9 of Harris & Campbell 1995. Harris and Campbell also make the following observation:

A third type of split in alignment involves a distinction between main and subordinate clauses, such that one alignment type is found in main clauses in a language, and another alignment type in subordinate clauses. Here, however, there is no universal distribution. (1995:243)

The processes of extension shown earlier, whereby originally dependent clause structures are reinterpreted as independent sentences, can help us explain this anomaly. It should be recalled that Yup’ik verbs end in a mood marker followed by a pronominal suffix. The pronominal suffixes used in indicatives and participials show an ergative/absolutive pattern. In the paradigm in 80, the first-person singular marker -nga, for example, generally represents either the single argument of intransitives or the patient of transitives: -nga ‘I’, -pe-nga ‘you/me’.

(79) Indicative and participial pronominal suffixes: ergative/absolutive patterns

<table>
<thead>
<tr>
<th>Case</th>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
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<tbody>
<tr>
<td>-nga</td>
<td>1SG</td>
<td>-mken</td>
</tr>
<tr>
<td></td>
<td>1SG/2SG</td>
<td>-pe-nga</td>
</tr>
<tr>
<td>-mci</td>
<td>1SG/2PL</td>
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<td>-gka</td>
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(80) Indicative and participial pronominal suffixes: ergative/absolutive patterns

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(78) Yup’ik possessed nominal and indicative structures

a. angutem iqairaa
   angut-em iqa-ir-gar-a
   man-GEN dirt-remove-NMZ-3SG/SG
   the man’s his washed things
   ‘the man’s clean laundry’

b. Angutem iqairaa.
   angut-em iqa-ir-gar-a
   man-ERG dirt-remove-TR.INDIC-3SG/3PL
   the man he washes them
   ‘The man washed them.’

The modern indicative construction apparently developed from a nominalized dependent clause construction by the same processes of extension into discourse and subsequent competition with an earlier indicative that we see underway today with the partical and the subordinative.

(78) Yup’ik possessed nominal and indicative structures (George Charles)

a. angutem iqairaa
   angut-em iqa-ir-gar-a
   man-GEN dirt-remove-NMZ-3SG/SG
   the man’s his washed things
   ‘the man’s clean laundry’

b. Angutem iqairaa.
   angut-em iqa-ir-gar-a
   man-ERG dirt-remove-TR.INDIC-3SG/3PL
   the man he washes them
   ‘The man washed them.’
case ending. Compare angya-mni ‘in my boat’, angya-ani ‘in his/her boat’, and angya-mni ‘in his/her own boat’.

The extension of dependent structures into uses as independent sentences, and their subsequent competition with older independent sentence structures, can thus have a major effect on basic clause structure, ultimately resulting in the replacement of one core argument pattern with another.

If indicatives and participials are also descended from possessive constructions, we might wonder why they do not show similar nominative/accusative patterning, with subjects of both intransitives and transitives coded the same way as possessors. In these moods, intransitives and transitives come from different sources. The intransitive indicative suffix -(g)tua is traced back to Proto-Eskimoan *-Lul, which already served as an intransitive indicative in the parent language (Fortescue et al. 1994:397). There is no evidence that a possessive construction was ever involved. The transitive indicative suffix -(g)ara is traced to a nominalizer *-Lar that was added only to transitive verbs (Fortescue et al. 1994:395–96). It derived nouns referring to the patient of the verb: ‘the washed thing’. In order to add reference to an agent, a possessive construction was exploited: ‘my washed one’. As seen earlier in §2.3, the intransitive and transitive participials -lria and -ke are also derived from distinct sources. The result is not unlike the ones described by Gildea (1992) in Carib languages that came about through the collapse of biclausal constructions into simple sentences.

Whether or not processes of extension and replacement can result in shifts in argument patterns depends on how the original dependent structures were formed. If markers of dependency are added to full clauses that already contain core arguments, like the Navajo adverbializer =go, then the resulting dependent clauses will have the same

<table>
<thead>
<tr>
<th>INTRANSITIVE</th>
<th>TRANSITIVE</th>
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<tbody>
<tr>
<td>-m-ni 1sg</td>
<td>-m-ken 1sg/2sg -vnga 2sg/1sg</td>
</tr>
<tr>
<td>-m-tek 1sg/2su -viegnga 2su/1sg</td>
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<tr>
<td>-m-ci 1sg/2rm -vciia 2rm/1sg</td>
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<tr>
<td>-m-ku 1sg/3sg -anga 3sg/1sg</td>
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<tr>
<td>-m-kek 1sg/3su -agnga 3su/1sg</td>
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<tr>
<td>-m-ki 1sg/3rm -angga 3rm/1sg</td>
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<tr>
<td>-a-ni 3sg</td>
<td>-a-nga 3sg/1sg -mku 1sg/3sg</td>
</tr>
<tr>
<td>-a-kuk 3sg/1su -megnegu 1su/3sg</td>
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<tr>
<td>-a-kut 3sg/1pl -mtegggu 1pl/3sg</td>
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<td>-a-ten 3sg/2sg -vpu 2sg/3sg</td>
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<td>-a-tek 3sg/2su -vtegu 2su/3sg</td>
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<tr>
<td>-a-ci 3sg/2pl -vciiu 2pl/3sg</td>
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<tr>
<td>-mi-ni 3r.sg</td>
<td>-mi-a 3r.sg/1sg -mni 1sg/3r.sg</td>
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<tr>
<td>-mi-kek 3r.sg/1su -megnti 1su/3r.sg</td>
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<td>-mi-ten 3r.sg/2sg -vnii 2sg/3r.sg</td>
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<td>-mi-tek 3r.sg/2su -weitgi 2su/3r.sg</td>
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<td>-mi-ci 3r.sg/2pl -vciini 2pl/3r.sg</td>
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</tr>
</tbody>
</table>

If Yup’ik speakers were to begin using any of the Yup’ik connective constructions autonomously as independent sentences, as they did the indicative, participial, and subordinative, and these new independent sentence structures edged out the older ones, the result could ultimately be a shift from ergative/absolutive to nominative/accusative patterning. The extension of dependent structures into uses as independent sentences, and their subsequent competition with older independent sentence structures, can thus have a major effect on basic clause structure, ultimately resulting in the replacement of one core argument pattern with another.
argument structure as independent clauses. If markers of dependency are added to verbs alone, as in Yup’ik, then additional factors come into play. The Yup’ik connective moods show nominative/accusative patterning, because they were formed by coding all subjects as possessors. The Yup’ik indicative, participial, and subordinative moods, however, show ergative/absolutive patterning, because intransitives and transitives developed from different sources, and different strategies were exploited for the coding of arguments.

6. CONCLUSION. We have seen a recurring type of diachronic development that may be much more common than hitherto recognized. It consists of the extension of the scope of grammatical dependency markers from the domain of the sentence to larger discourse and pragmatic contexts. The independent status of the sentences that bear dependency markers in the languages seen here is indicated by several features. One is the relaxation of coreference requirements across the sentences. A second is the fact that there is often no single clause within the pertinent stretch of speech that could be identified as a superordinate matrix clause. These sentences are also typically prosodically distinct: they are produced with a full, final fall in pitch, and followed by a new sentence that begins with a pitch reset. In addition, they are generally translated as independent sentences by bilingual speakers.

Diachronic processes of this type may have gone unnoticed in part due to traditional methodologies of grammatical analysis that have focused on the structure of individual sentences in isolation. When longer stretches of unscripted speech are examined in a variety of genres, higher-level structures are more likely to appear, and their variety becomes more evident. The various constructions seen here have all developed through the same mechanism, but they originated from different sources and are now utilized for different discourse functions. All are dependent in some way, but some could be characterized as subordinate, and others not. As is typical of discourse-level devices, they are exploited to varying extents in different genres, in different rhetorical styles, and by different speakers.

An awareness of processes of extension beyond the boundaries of the sentence can alert us to structures we might otherwise miss. They can also contribute to our understanding of the reasons behind certain basic morphological and syntactic patterns.

APPENDIX: YUP’IK MOOSE TEXT (ELENA CHARLES)

[Tell us, Mom, about your first trip upriver to get moose.]

Uh ha,

Tuntutinu aneqatruku

‘We were waiting for the moose to come out [from the thicket].’

Tuntut-wi aneqatruku.

‘The moose was indeed going to escape.’

Qulliqkun[aranatunep] teaq

‘We made a commotion.’

Teaqatimun anyarnix xumi.

‘We got lively in the boat.’

Tuani kiingertuq man’a.

‘There the boat began to rock.’

[General laughter]

Ellakkitaar teaq

‘I was making lots of noise.’

‘Patagin! Kiiika xuma.’

‘Quick! Yes, the one across there.’

Cunuklik uku netepa.

‘He shot the one across there with the antlers.’

Cunuklik uku netepa.

‘Even as he began to shoot that one over there the one with horns, its relatives, a female and her offspring——

Cunuklik uku netepa.

‘And so he shot the one with the antlers repeatedly.’

Tuu’ll tuu’i pugratim.

‘And then that one got up suddenly.’

Massiinarpuk-llu ayagciiga

‘And our motor wouldn’t start.’

Anguar xuma-gguq

‘He said that I should row the boat’

qerar.

‘and we could cross.’
Remember, Frank had a boat.

A great big wooden boat.

Over there, along the other side, the oar—

I was rowing quickly with the oars.

I crossed and then

I was rowing with the oars.

Just an enormous old moose!

It was accompanied by a smaller one.

right in front of the boat.

Don’t pay any attention to them.

Dock in front of them.

They will not attack you!

I was probably attempting to start the motor.

And so after I went that way

I crossed, once again, in that direction.

I

REFERENCES


THE EXTENSION OF DEPENDENCY BEYOND THE SENTENCE


IWASAKI, SHOICHI. 2000. Suppressed assertion and the functions of the final-attributive in prose and poetry of Heian Japanese. Textual parameters in older languages, ed. by
Susan Herring, Pieter van Reenen, and Lene Schøsler, 237–72. Amsterdam: John Benjamins.


KOIKE, KIYOJI. 1967. Rentai-shuushi-hoo no hyoogen-kooka: Konjaku Monogatari, Genji Monogatari o chuushin ni [The stylistic effect of attributive sentences]. *Kokugogaku (Gengo to bungei)* 54.9/5.12–21.


THE EXTENSION OF DEPENDENCY BEYOND THE SENTENCE


Young, Robert, and William Morgan (eds.) 1954. Navajo historical selections, selected, edited, and translated from the Navajo. Phoenix: Bureau of Indian Affairs.


