I Linguistic Analysis of Discourse
1 Discourse and Grammar

MARIANNE MITHUN

0 Introduction

Language has traditionally been understood as a hierarchical system of systems: phonology, morphology, syntax, etc. A tenet of much of linguistic theory, particularly the American Structuralist and Generative approaches that arose during the twentieth century, was that intellectual rigor depended on a strict separation of these levels as autonomous, self-contained domains. For practical reasons, work began at the smaller, more concrete levels. Phonology was the study of the patterning of sounds; morphology how morphemes are combined to form words; syntax how words are combined to form sentences. Within mainstream theory in America, the focus had not yet moved to discourse, presumably the study of how sentences are combined to form texts, that is, structure beyond the sentence.

As described by Tannen (Schiffrin, Tannen, and Hamilton 2001: 2–3), the last quarter of the twentieth century saw a blossoming of the status of the field of discourse analysis. Symposia devoted to discourse analysis began to spring up, first at Georgetown University and then elsewhere, as did journals such as Discourse & Society, Discourse Studies, Journal of Linguistic Anthropology, Journal of Pragmatics, Journal of Sociolinguistics, Multilingua, Narrative Inquiry, Pragmatics, Research on Language and Social Interaction, and Text. In certain quarters, work on grammar began to include consideration of the discourse context and the cognitive factors behind discourse structure. Among the important figures leading this were Chafe (1976, 1980, 1987, 1994) and Givón (1979, 1983, 1990; Givón and Gernsbacher 1994). (Both of these authors have continued to produce pioneering work.) All discourse-analysis work shares a focus on extended bodies of speech in its communicative context. It is generally strongly empirically based. But it is not a monolithic endeavor characterized by a single set of questions, a single focus of inquiry, a single methodology, or a single theory. The variety of interests and approaches that characterize the field is richly exemplified in this volume.

For those interested in language structure, it is now generally recognized that discourse is more than an autonomous level beyond the sentence. Grammar provides speakers with tools for packaging information. And how information is packaged depends on the larger discourse context, the flow of thought through time, the communicative and social goals of the speaker, the presumed knowledge state of the audience, and more. Many of the grammatical choices speakers make at all levels – morphology, simple clause structure, and complex sentence structure – can be detected and understood only with respect to the discourse situation. At the same time, a full understanding of the discourse structures of a language depends on the recognition of the grammatical devices that signal them. Discourse structure is indicated by markers at all levels. It is more than the simple manipulation of sentences.

The relationship between discourse and grammar goes deeper. Recurring patterns of expression play a major role in the development of grammatical structures through time. What speakers choose to say the most often in the course of their daily interactions can become crystallized in grammar. In some cultures, for example, acceptable patterns of speech include specification of the source of information. With use, an expression such as ‘they say’ can become routinized, processed as a single unit. Over time, the expression may lose its internal compositionality and erode phonologically, until it is just a particle, a clitic, or an affix. It may even become obligatory. As Ariel puts it, “discourse depends on grammar, which in turn depends on discourse” (2009: 5).

A central aspect of the study of grammar is discovering what features all languages share and the ways they can differ. But, as long as our vision stops at the sentence, we will miss too much. The study of speech in its full discourse contexts can reveal cross-linguistic differences at all levels that may not be obvious when grammatical analyses focus on one level of structure at a time, each in isolation from the others. This chapter illustrates the kinds of intimate relations that hold between discourse and grammar in a language that is typologically quite different from more familiar major world languages. This is Mohawk, an Iroquoian language of northeastern North America, spoken primarily in Quebec, Ontario, and New York State. Much of the essence of the language could go unnoticed without examination of spontaneous, interactive speech in its discourse context.
Pedagogical grammars are often rich in sentences constructed in isolation. Those in (1) all occurred in materials designed for teaching Mohawk. (Spelling has been regularized.1)

(1) Textbook sentences

   I painted light green this chair  
   ‘I painted this chair light green.’

b. Ne rón:kwe ró:ien’ ne atókwa’.  
   the man he has the spoon  
   ‘The man has the spoon.’

c. Thí:ken iakón:kwe ienón:we’s kí:ken roksten’ha raowennókwas.  
   that woman she likes this old man’s radio  
   ‘That woman likes this old man’s radio.’

d. Óhonte’ ken nikahiatonhseró:ten’ ró:ien’ thí:ken rón:kwe?  
   green Q it is such kind of book he has that man  
   ‘Does that man have a green book?’

All of the words here are morphologically correct. It is unlikely that any of these sentences was ever uttered spontaneously by a speaker, however. If grammatical descriptions of the language were based on such sentences alone, the essence of the language would be severely distorted. The organization of information here, both the packaging of ideas into words and the combination of words into clauses and sentences, is decidedly un-Mohawk. Other grammatical features that are pervasive in normal speech are simply absent. The following sections will show how even seemingly straightforward grammatical structures cannot be understood fully without a consideration of their uses in their discourse contexts. All of the Mohawk material cited from this point on is drawn from a conversation at Kahnawá:ke, Quebec, involving a lively group of speakers ranging in age from their mid-twenties through their mid-seventies.2 All examples are from first-language speakers over the age of 60. They are arranged such that each line represents a separate intonation unit or prosodic phrase. In some cases, the larger context is provided just in free translation, but the original was in Mohawk.

2 The Word

One obvious difference between Mohawk and English is the packaging of information into words. Often a single Mohawk word corresponds to multiple English words. A typical example is in (2).3
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(2) Tesewatenna’tsherenhawe’
    te-se-wa-tenna’tsher-enthaw-e’
    CISLOC-2-PL-lunch-carry-ST
    ‘You all brought your lunches.’

But speakers have choices. Direction or location, for example, can be indicated by a
verbal prefix, such as the cislocative te- ‘hither, here, there’ in (2), but also by a sep-
ate word, such as kén: ‘here’ or thó ‘there.’ Referents are identified by pronominal
prefixes, such as sewa- ‘you all’ in (2), but also with separate words, such as fise ‘you.’
Objects can be identified in words, such as ‘lunch’ here, or by separate nouns, such
as atennà:tshera’ ‘lunch, groceries.’ As will be seen throughout this chapter, such choices
are not random.

2.1 Lexical categories

A basic unit of grammatical structure is the word class. Languages differ in the ways
information is distributed among kinds of words. Mohawk contains just three lexical
categories, clearly distinguished by their internal morphological structure: particles,
nouns, and verbs.

Particles have no internal structure and serve a variety of functions, such as i:’i ‘I,’
ne ‘the aforementioned,’ kik̓en ‘this,’ and the interrogative ken in the examples in (1)
above.

Morphological nouns contain a gender or possessive prefix, a noun stem, and a noun
suffix. The neuter prefix is ka-, o-, or zero, as in atókwa’ ‘spoon’ in (1). A possessive pre-
fix rao- ‘his’ can be seen in rao-wennókwas ‘his radio.’ The most common noun suffix –a’
appears at the end of atókw-a’ ‘spoon.’ Nouns generally function syntactically as argu-
ments, as would be expected.

Morphological verbs contain minimally a pronominal prefix and a verb stem. The
prefix identifies the core arguments, one for intransitives and two for transitives. The
verb wa’kkontsheráro’ ‘I painted’ in (1a), for example, contains the first-person-singular
prefix k-, the stem -kontsherárho- ‘paint,’ and the perfective suffix –’. Verbs may also con-
tain numerous other elements. They can function syntactically as predicates, as in (1a)
‘I painted the chair,’ but they can also serve as full clauses. The word wa’kkontsheráro’
is a complete grammatical sentence in itself: ‘I painted it.’

Morphological verbs can also serve other syntactic functions. They can be used as
referring expressions with no change in form, such as kawennókwas ‘radio,’ and function
syntactically as arguments.

(3) kawennókwas
    ka-wenn-okw-as
    N.AGT-word-disperse-HAB
    ‘it word-disperses’ = ‘radio’

Many morphological verbs, such as ‘radio,’ have been lexicalized as referring expres-
sions. If a Mohawk speaker were asked about the meaning of kawennókwas, the first
answer would probably be ‘radio.’ Lexicalization is a matter of degree: some verbs are normally used as nominals, others as both arguments and predicates, and still others only as predicates. Some other examples of verbal arguments from this conversation are in (4).

(4) a. ronathiatonhsherawiénhston
   ron-at-hiation-hsher-a-weien-hst-on
   M.PL.PAT-MID-write-NMZRLK-know.how-INST-ST
   ‘they know how to write’ = ‘literate people, learned people’

   b. tewahrónkha’
   te-wa-ahronk-ha’
   1INCL.AGT-PL-speak-HAB
   ‘we all speak/understand a language’ = ‘we fluent ones’

Mohawk contains no adjective category. Properties expressed with adjectives in other languages are conveyed in Mohawk with verbs.

(5) a. Ranekenhteron:thakwe’.
   ra-nekenhteront-ahkwe’
   M.SG.AGT-be.handsome-HAB.PAST
   ‘He was handsome.’

   né: thi:ken kwah io-at-ter-on
   it.is that quite N.PAT-MID-frighten-ST
   ‘That’s scary.’

Morphological verbs can also function as adverbials, like sewa:íren’s ‘sometimes’ in (6).

(6) Tanon’ sewa:íren’s
   tanon’ se-w-at-ieren-’s
   and REP-N.AGT-MID-happen.spontaneously-DISTR
   and it happens here and there
   ‘And sometimes
   kwah kí:ken tsi niwenhni:seró:ten
   on a day like this
   I go along and do something different, you know.’

Due in part to their ability to function syntactically like the clauses, predicates, arguments, adjectives, and adverbs of other languages, morphological verbs are extremely frequent in Mohawk speech. When Wallace Chafe counted the proportion of nouns to
verbs in a corpus of English conversation, he found a noun-to-verb ratio of about 1:1. A count over a similar Mohawk corpus yielded a proportion of 1:17.

The difference is not confined to morphological category. It appears in syntactic predicate-to-argument ratios as well. Patterns of idiomaticity vary interestingly across languages: what might normally be expressed in a predicate in one language might be expressed more often in an argument in another. During the conversation examined here, one speaker rehashed the morning’s activities for a latecomer. What she later translated into English as ‘we did work’ was expressed with just the Mohawk predicate ‘we worked.’ What she translated as ‘a lot of’ was expressed in the Mohawk predicate ‘it was much.’

This conversation was full of similar differences. What was translated as an English possesses noun phrase ‘your habit’ in (8) was packaged in Mohawk in a predicate ‘how you are habituated.’

A sentence translated ‘I am waiting to have some soup’ contained no noun ‘soup’ in Mohawk. The idea of soup was conveyed by a predicate based on the verb stem -atshori ‘slurp.’

The sentence ‘he’ll still be a young man’ contained no noun ‘young man.’ The idea was expressed in a predicate based on the verb root -nekenh-ter ‘be good looking, be a young man.’
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still he will continue being a young man
‘He’ll still be a young man.’

Mohawk speakers often use predicates for the idiomatic expression of ideas that English speakers convey with arguments. The difference is striking, but it emerges most clearly in unscripted speech in context.

2.2 Incorporation

Mohawk speech is characterized by a higher proportion of predicates for another reason. It contains a robust noun-incorporation construction, a kind of noun–verb compounding that yields a complex verb stem. Incorporated nouns are somewhat rarer in isolated constructed sentences than in spontaneous speech, though they do occur in lexicalized expressions such as ka-wenn-okwas ‘it-word-scatters’ = ‘radio.’ Mohawk verbal counterparts to attributive adjectives in other languages often contain incorporated nouns.

Ionic-wa-nontsist-a-hnir-on
1PAT=PL-head-LK-be.hard-ST
‘We are hard-headed.’

Some adverbial notions are expressed with incorporating verbs.

(12) Enhontewennahsnó:ronte’.
en-hon-ate-wenn-a-hsnoron-t-e’
FUT-M.PL.AGT-MID-word-LK-be.fast-CAUS-PFV
‘They will word hurry’ = ‘They’ll speak fast.’

But the full nature of noun incorporation cannot be appreciated in isolated sentences. Some of the motivations behind speakers’ choices between independent and incorporated nouns can be seen by tracing the use of the noun root -wenn- ‘word, language’ through a stretch of the current conversation. The remark in (7) above, ‘This morning we did a lot of work,’ was addressed to a man who had just arrived. It was followed by (13). This first mention of the language to the newcomer was accomplished with an independent noun: onkwawén:na’ ‘our language.’

(13) Wa’akwa’seré:shon kí:ken nahó:ten’,
we dragged around this what
tsi ni:ioht tsi ioi:o’tens ne,
as so it is as it works that
The group lamented the difficulty of speaking Mohawk without reverting to English. The new arrival said (in Mohawk), ‘My older brother’s like that. When we get together and talk, he starts speaking English to me. And he’s my older brother.’ In the next sentence, ‘You would think he would push the language,’ the noun -wenn- ‘language’ was incorporated. The language was already the established topic of conversation, so a separate word was not necessary to focus special attention on it.

(14) Á:hsenhrek
‘You would think

$tóka’ raónha ia:hawennà:reke’.
toka’ raonha i-aa-ha-wenn-a-hrek-e’
maybe himself TRLOC-OPT-MSG.AGT-language-JR-push-PFV
maybe himself he would language push
that he would push the language.’

Incorporation is used as a rhetorical device for controlling the flow of information. One speaker could have said simply, ‘You’ll add to the story.’ Instead, he developed his point in two intonation units, two clauses, the second, with an incorporated noun, an elaboration of the first.

(15) Tanon’ ostôn:ha a:kí:ron’ ienhsáhsónteren’
tanon’ oston=ha aa-k-ihron’ i-en-hs-ahsonten’
and bit=DIM OPT-1SG.AGT-say-PFV TRLOC-FUT-2SG.AGT-add-PFV
and a little I would say you will add there
‘And I’d say you’ll add on just a bit,
iensehskarahsónteren’.
i-en-se-hs-kar-ahsonteren’
TLOC-FUT-REP-2SG.AGT-story-add-PFV
you will story add again there
you’ll add to the story.’

Incorporated nouns do not bear a specific grammatical relation in the clause. They simply evoke a kind of entity, much like the non-head in English noun–noun compounds.

There is more to noun incorporation in Mohawk than online management of attention. Speakers do not necessarily produce language morpheme by morpheme as they speak. Frequently recurring chunks of language become routinized over time. As noted earlier, many verbs containing incorporated nouns have become lexicalized,
stored as unitary expressions for single concepts. Lexicalization is a significant factor in noun incorporation: in speech, in many cases, both those like ‘radio’ and those like the alternation between incorporated and independent ‘language,’ incorporation is not an online process of word formation but rather a choice between existing alternatives.

Lexicalization can extend beyond the boundaries of the word, a fact that also affects the frequency of incorporation. A speaker remarked:

(16) Teiotierónnnion’ tsi nitewawenní:ten
    te-io-at-ier-on-nion’ tsi ni-tewa-wenn-o’ten’
    DV-N.PAT-MID-be.strange-DISTR how PRT-1INCL.PL-language-be.a.kind.of-ST
it is strange how so our language is
‘Our language is strange.’

The language was already under discussion, so the incorporation of -wenn- could be attributed to its information status. But there was another factor. The construction consisting of the particle tsi plus a verb containing the partitive prefix (here ni-), an incorporated noun, and the verb root -o’ten ‘be a kind of’ is well established in the language. It is the way one talks about what something is like.

Frequency of use is an important aspect of incorporation. Some verb roots can appear with or without incorporated nouns. But some never incorporate, some rarely incorporate, some often incorporate, some usually incorporate, and some always incorporate. Some verbs that always incorporate denote relative properties, such as -iio ‘be good.’

wak-at-shennonni tsi ni-ó-r-e’ tsi se-wen-ní:io
1SG.PAT-MID-be.happy how PRT-N.PAT-be.far-ST how 2SG.AGT-language-be.good
I am happy how it is so far how you are language good
‘I am happy at how good your language is.’

Some verbs that always or usually incorporate contribute little independent information of their own, such as -ien ‘lie,’ which often serves simply to indicate the presence or absence of a referent.

(18) Iah kwah thiekwén:najen’.
iah kwah th-ie-ka-wen-a-ien’
not just CONTR-TRLOC-N.AGT-WORD-LK-lie-ST
not just does it word lie there
‘There just isn’t a word.’

Noun stems show a similar range of frequency of incorporation. Some are never incorporated, some rarely, some often, and some always. Many of those that incorporate more frequently have more general, even abstract meanings, such as -nikonhr- ‘mind’ in verbs pertaining to mental phenomena, -ia’t- ‘body’ in verbs pertaining to physical properties of animate beings, and -rihu- in verbs pertaining to abstract matters.
Without discourse, our understanding of noun incorporation would be superficial at best. Noun incorporation allows speakers to package familiar unitary concepts in single, lexicalized words, and also to carry established referents within verbs in ongoing speech without drawing special attention to them.

3 The Clause

In most models of syntax, a basic clause is assumed to consist of a predicate and one or more arguments. As seen in the previous section, the two may be packaged in a single word in Mohawk, a verb, such as Tesewatenna'tsherénha'we' 'You all brought your lunches.' Arguments can also be identified by additional words, as in Aoňsetewatšen:ri' nonkwawén:na' 'We could find our words,' with nonkwawén:na' 'our words.'

3.1 Arguments

As in other languages, arguments in Mohawk may be identified by a simple pronoun or noun, or a more elaborate construction. The isolated sentences in (1) seen above show argument structures similar to those of English. A look at discourse shows a quite different story.

3.1.1 Pronominal arguments

In addition to the pronominal prefixes in verbs, Mohawk contains independent pronouns.

(1a) 1'i wa'kkontsheràrho' kahentará:ken ki:ken anitskwà:ra'.  
     I painted light green this chair
     'I painted this chair light green.'

But these pronouns are actually rare in speech. Such patterns have sometimes been referred to as ‘pro-drop’: the pronoun is assumed to be present to begin with, then dropped under certain circumstances, as when reference is otherwise clear.

In the conversation discussed here, there are 195 first-person references, of which 12 are independent pronouns; there are 128 references to second persons, of which eight are independent pronouns. Given the numbers, the hypothesis that independent pronouns are dropped when reference is clear would be difficult to defend. All Mohawk verbs contain obligatory pronominal prefixes identifying their core arguments, so reference is always clear, even when an independent pronoun is used. The clause in the third line of (19), for example, contains both the independent pronoun i: and the pronominal prefix k- in the verb.

(19) Ahská:raton
     'You could tell a story,
     sok uh,
     then ah,
The pronominal prefixes actually make more distinctions than the independent pronouns. There are, for example, distinct prefixes for first-person-singular agent, first-person-inclusive-dual agent, first-person-exclusive-dual agent, first-person-inclusive-plural agent, first-person-exclusive agent, first-person-singular patient, first-person-dual patient, first-person-plural patient, first-person-singular inalienable possessor, first-person-dual inalienable possessor, first-person-plural alienable possessor, and first-person-plural alienable possessor. All of these categories are expressed with the same independent pronoun: $\dot{i}$, often shortened to $i$.

The independent pronouns have special discourse functions. One is to mark a shift in topic, as in (19) above: ‘You could tell a story, then I could continue …’ Another is to mark focus, information that the speaker deems especially important. Speaker A below was making fun of the dialect spoken in a neighboring community. Speaker B, who was born there, protested.

\begin{verbatim}
(20) B: ‘Come on.’
A: ‘I’m not making fun of you.’
B: ‘I never spoke like that.’
A: ‘That’s not what I’m saying.’
B: $\dot{i}$: kwi’ tehsekĸːa:nē: tsi nē: sâ:ton
\[\text{Well you are looking at me as that you are saying}\]
A: $\dot{l}$:se’ ki’ wâhe’ āktâ’ ihsete’.
\[\text{Well you’re the one that’s standing close by.’}\]
\end{verbatim}

This focus construction is often characterized by distinctive intonation as well. The focused element is pronounced with extra-high pitch, visible in the bump in the pitch trace in Figure 1.1.

Independent pronouns are also often used to highlight a focus of contrast.
Figure 1.1 Focused pronoun ‘me.’

(21) Akwé:kon ne ísten’néha enkhenatahren’s:éra’
all the my mother I will go visit
‘Even when I go visit my mother

í: wakahkwí:shron onkwehné:ha’ a:katá:ti’
I am striving real person style I would speak

I’m the one that’s trying to speak Mohawk.

3.1.2 The Determiner Phrase

In most current syntactic theory, arguments are analyzed as clausal constituents, Determiner Phrases, with an internal structure of their own. The prototypical Determiner Phrase consists of a determiner (article or demonstrative), optional adjectives, and a noun: a nice book, this lovely house. As noted, Mohawk has no adjective category. It does, however, contain both an article and demonstratives.

If we look at the isolated sentences in (1) earlier, the Mohawk article ne seems comparable to English ‘the.’

(1b) Ne rón:kwe ró:ien’ ne ató:kwa’.
the man he has the spoon
‘The man has the spoon.’

The absence of Mohawk ne corresponds to an indefinite article in the English translation.

(1d) Ohonte’ ken (__) nikahiatonhsø:ten’ ró:ien’ thí:ken rón:kwe?
green Q such kind of book he has that man
‘Does that man have a green book?’

As described in detail by Chafe (1976, 1994), the English definite article indicates identifiability: it signals that the speaker assumes the hearer can identify the referent. Identifiability can come from various factors: uniqueness (Don’t look at the sun [there is only
one sun], common knowledge (I’ve already fed the dog [we have just one dog and we both know who it is]), prior mention (I bought a coat and matching scarf. The coat . . .), or association with something identifiable (I bought a coat. The sleeves . . .). Judging from (1b) and (1d) above, Mohawk ne seems to mark general identifiability.

But, in more extensive bodies of speech, Mohawk ne sometimes appears in contexts where English the would not.

(22) With ne

I: akwé: tewáhawe’ ne onkwawén:na’.
we all we all hold ne our language
‘All of us hold ( ) our language.’

And it is sometimes absent from contexts where English the is used.

(23) Without ne

Wà:kehré’ tsi ( ) iakenheion’taientákhkwá’
I thought place one lays out the dead with it

/tsi tehshakotits’en:tha’ iei:teron’/
place they cure people there she resides.

‘I thought maybe she was in the hospital.’

An accurate understanding of ne emerges only from discourse. Speaker A below brought up a word she had heard used for ‘thousand,’ iohsóhserote’. (The entire conversation was in Mohawk.)

(24) A: Teiotierónnnion’ tsi nitewawennó:ten’.
it is strange how so our language is a kind of

Iohsóhserote’.

B: Hen
‘Yes.’

A: Né: ken né: owennaká:ion ne iohsóhserote’
it is Q it is old word ne
‘Is that an old word, ne iohsóhserote’?

B: No, it comes from French. See, the hundreds are added to it.

C: That’s how I heard X on the radio. He said, ‘The hundreds are standing.’

B: Yes, that’s it isn’t it.

Nonkwawén:na’ íahn se’ teionkwaién:tahkwe’
ne=our language not indeed did we use to have
Mohawk ne does not mark general identifiability but rather previous mention within the discourse. The first time the word *iohsohserote* was mentioned, there was no *ne*. The second time it was preceded by *ne*: ‘Is it an old word, *ne iohsohserote*?’ The *ne* next appears with a possessed noun: ‘*ne our language,*’ pronounced *nonkwawén:na’*. At this point the language was already under discussion. The *ne* appears again in the following line, this time before ‘our words,’ also a central topic of the ongoing discussion. Two lines later, it appears before ‘word (ne owén:na’), again a referent established a few lines before. Finally, in the last line, it occurs before a complement clause: ‘our renting it.’ This clause, the argument of the matrix *ioti:ren* ‘it is surprising,’ is functioning as a nominal, identifying a previously introduced idea. The Mohawk *ne* is thus better rendered as ‘the aforementioned.’ It often appears to function like the English definite article *the*, because previous mention is a common way of establishing definiteness. But the actual meaning ‘the aforementioned’ can only be seen in discourse.

This refined understanding now allows us to make sense of the two sentences seen earlier. The sentence ‘All of us hold *ne our language*’ in (22) occurred in the midst of a discussion about the Mohawk language. When the speaker remarked in (23), ‘I thought maybe she was in *(the)* hospital,’ this was the first mention of the hospital, so there was no *ne*, even though there is only one hospital in this community. Sentences constructed in isolation, even by skilled native speakers, often do not reflect the functions of markers whose meanings depend on a larger discourse context.

It is generally assumed that a fundamental element of the Determiner Phrase cross-linguistically is the demonstrative. Judging from the isolated sentences in (1) earlier, the Mohawk *kikén* and *thikén* seem comparable to English ‘this/these’ and ‘that/those.’
At first glance, spontaneous speech appears to reflect a similar structure.

The prosody reveals a different structure. The group had been discussing dialect differences between communities. In Kahnawà:ke, where this conversation took place, the cluster /ts/ is pronounced [dz] before a vowel: [odzı:dzı:] ‘flower’. In another community, Ahkwesáhsne, it is pronounced [dʒ]: [odʒı:dʒı:]. The utterance in (25) actually consisted of two prosodic sentences. The first ended with thı: ‘that’ and a full terminal fall. It was separated from the next by a response from a listener. The second sentence began with a high-pitch reset on the stressed syllable. (The pitch appears extra high because of the tone, characterized by an extra-high rise followed by a steep plunge.)

A pitch trace can be seen in Figure 1.2. The sequence thı: otsı:tsıa’ does not constitute a single constituent.

Figure 1.2  Demonstrative thı: ‘that.’
Larger stretches of discourse show that demonstratives are rarely elements of a Determiner Phrase constituent in Mohawk. Demonstratives do occur on occasion before nouns, but they are usually referring expressions on their own. Furthermore, they more often serve functions beyond what would be predicted from the expected Determiner Phrase structure. As seen earlier, a Mohawk verb can constitute a complete sentence on its own. Additional elaboration is possible with lexical arguments. But, as pointed out by Chafe (1987, 1994), speakers are careful not to introduce too many major new ideas at once. One strategy for conveying one new idea at a time is to begin with a predicate (perhaps with particles) followed by a demonstrative. The demonstrative serves as a place holder, signaling that further specification is to follow. In (27), as throughout, each intonation unit is presented on a separate line. The proximal demonstrative is \( kı:ken \) ‘this,’ often shortened to \( kı: \).

(27) Demonstrative as place holder

\[
\begin{align*}
\text{Wà:kehre’} & \quad \text{\textit{ki’}} & \quad \text{\textit{kı:ken}} & \quad \text{um,} \\
\text{\‘I thought this,} & \\
\text{teiotionhontsöhon} & \quad \text{\textit{ne}~}, \\
\text{it is necessary} & \quad \text{the} \\
\text{tsi nikarihò:ten’} & \quad \text{\‘ki’,} \\
\text{how} & \quad \text{so it matter is a kind of} & \quad \text{in fact} \\
\text{enska enkahwistà:’eke’} & \quad \text{enkherihónnien’} & \quad \text{\‘ne:} & \quad \text{\‘kı:ken,} \\
\text{one} & \quad \text{it will metal strike} & \quad \text{I will teach them} & \quad \text{it is} & \quad \text{this} \\
\text{I would teach them for one hour this} & \\
\text{wa’onkwaio’tén:ta’ne’} & \quad \text{\‘…} \\
\text{we worked} & \quad \text{what we worked on \‘…} \\
\text{\‘The segmentation of ideas into phrases can be seen in the sound wave and pitch trace in Figure 1.3.} \\
\text{The Determiner Phrase, considered a fundamental element of syntactic structure in most current models of syntax, might appear to be a language universal on the basis of}
\end{align*}
\]

![Figure 1.3](image-url) Demonstratives as place holders.
sentences constructed in isolation. It is well known, of course, that languages vary in the order of elements within their Determiner Phrases; in some languages, for example, determiners and other material precede the noun, as in English, while in others they follow, as in Japanese. Examination of spontaneous speech in context, however, indicates that there can be deeper differences involving the relationships between these constituents.

3.2 Core and oblique

Mohawk speakers differ not only in how they distribute information over words within clauses but also in how they distribute ideas over clauses within sentences and beyond. Such patterns and the reasons behind them are not always obvious from isolated sentences.

As mentioned, a basic notion in syntax is that the clause consists of a predicate, one or two (or three) core arguments, and any number of obliques (adjuncts). In English, obliques are usually marked with prepositions.

(28) Sally went to the park on Sunday with John by bicycle for some fun.

In some languages, obliques are marked with case endings. Mohawk has neither adpositions nor case endings. Core arguments are identified by a pronominal prefix in the verb, but the roles of lexical nominals are simply inferred. In (29), the location is identified by the word Kahnawà:ke. This is a placename, but there is nothing in the sentence to indicate its syntactic role. The same form would be used if the speaker were saying ‘Kahnawà:ke is a beautiful place’ or ‘We were discussing Kahnawà:ke.’

(29) Tetsá:ron ki’ ne’ thi: rontsha’ ne Kahnawà:ke. tetsiaron ki’ ne’e thiken ron-at-st-ha’ ne ka-hnaw=à:ke
both actually it is that M.PL-AGT-MID-use-HAB the N-rapids=place
‘They use both of those in Kahnawà:ke.’

But this language differs in a subtle way from canonical expectations. Mohawk clauses are not stacked with arguments. Ideas expressed in obliques in other languages are often expressed in other ways in this language. One is with noun incorporation, like the boat and the island in (30). Their semantic roles are often inferred from the verb, such as ‘encircle.’

(30) Wa’akwathonwà:reke’. . . wa’-akw-at-honw-a-hrek-e’
FACT-1EXCL.PL,AGT-MID-boat-LK-push-PFV
we boat pushed.
‘We got into the boat. . . .

Sok wa’kiakwatehwehnokwatá:se’. sok wa’-t-iakw-ate-hwehn-ohkw-a-tase~
then FACT-DV-1EXCL.PL,AGT-MID-island-be.in.water-NMZWLK-encircle-PFV
then we island encircled
Then we went around the island.’
In (31) the instrument ‘elbow’ is incorporated into the applicative verb ‘hit-with.’

(31) Wa’tekheiat hi wa’-te-khei-at-hiohs-a-ien-ht’.
FACT-DV-1SC/1SG-elbow-LK-hit-INST-PFV
I elbow hit her with
‘Hit her with my elbow’ = ‘I elbowed her.’

But often the additional referent is introduced in a separate clause, like the location ‘baskets’ in (32) and the companion ‘my grandmother’ in (33).

(32) Ê:só’ ki: ohwistanó:ron’,
much this precious metal
‘A lot of gold
thonwaná:wí’s.
it was given to them variously.
was handed to them.

A’therakónhson é:wa.
various basket interiors it is in them
It was in baskets.’

‘A lot of gold was handed to them in baskets.’

(33) Ó:nen akhsótha entieráthen’,
Then my grandmother she will climb up here
‘Then my grandmother would come upstairs.
Thò:ne ó:nen,
then now
At that time

tsik eniati:rene’.
tsì=k en-iaki-ahrent’
so=only FUT-1INCL.DU.AGT-sleep.together-PFV
so we two will sleep together
we would sleep together.’

‘Then my grandmother would come upstairs and I would sleep with her.’

On their own, these examples do not appear unusual. But monoclausal alternatives like ‘Gold was handed to them in baskets’ are rare in spontaneous discourse. When
asked directly for a translation of the English ‘She fried her eggs with butter,’ a Mohawk speaker provided the bi-clausal construction in (34).

(34) Elicited instrument

\[
\text{Owist\textsuperscript{\textdegree}sera’ w\textdegree:tiehste’}
\]

butter she used

‘She used butter

\[
ts\text{e’} \text{a’} \text{e’} \text{w}\text{onhsakeri’ta’we’}.
\]

as she egg fried

as she fried the eggs.’

‘She fried her eggs with butter.’

In (35) the time was introduced in one sentence and the language in another.

(35) \[
\text{Enska enkahwist’ eke’ kwah nekne tentewahth\textdegree:ren’}.
\]

one it will metal strike just and you all and I will talk

‘We’ll just talk for an hour.

\[
\text{Kanien’k\textdegree:ha’ tentewahth\textdegree:ren’}
\]

Mohawk you all and I will talk

We’ll talk Mohawk.’

Rather than presenting the idea ‘The learned people call it “polysynthetic”’ in a single sentence, the speaker packaged it in two sentences, three intonation units:

(36) \[
\text{N\textdegree: ki’ konw\textdegree:iat’s’}.
\]

that actually one calls it

‘That’s its name.

\[
\text{N\textdegree: ki’ ratina’t\textdegree:nhkhwa’}.
\]

that actually they call it by name

That’s what they call it,

\[
\text{ne ronathiatonhsherawe\textdegree:nhston}.
\]

the they know how to write

the learned people.’

As can be seen in the pitch trace (Figure 1.4), each sentence begins with a pitch reset.

Most current syntactic theories are founded on a notion of the basic clause consisting of a predicate, one or two core arguments, and any number of obliques or adjuncts. While logically straightforward, this formulation fails to capture the way speakers of Mohawk and many other languages actually package information as they speak. Without observation of longer stretches of discourse, we could easily miss the ways languages differ in their sentence organization, and the opportunity to explore the kinds of cognitive factors that might underlie such organization.
3.3 Word order in the clause

One of the first features usually mentioned in language descriptions is word order: subject, object, verb (SOV), SVO, VSO, and so on. The isolated sentences in (1) above suggest that Mohawk order is as in English, SVO. Clauses with two full lexical arguments are actually quite rare, as seen earlier. Those that do occur show a full variety of orders. If we look at clauses with just one lexical argument, we find robust usage of all possible orders. Sometimes the subject-like argument precedes the predicate (here abbreviated V).

(37) S V
Wariːnen wa’onke:wawa’sę.
NAME she helped me with the matter
‘Wariːnen helped me.’

But often it follows.

(38) V S
Nek tsi thó nːiohθ ne owéːna’ wáhe’
but there so it is so the language TAG
‘But that’s how the language is, isn’t it.’

We see the same variation with object-like arguments.

(39) V O
Tshienterháː’on ken rokstén:ha B?
you got to know him Q he is old B
‘Did you get to know old man B?’
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(40) O V
Akwé:kon ne ısten’néha enkhenahre’sè:ra’
all the my mother place I will go visit her
‘Even when I go visit my mother

f: wakahkwishron ınkwehnéha’ a:kátá’i’. I am trying real person style I would talk
I’m the one that’s trying to speak Mohawk.’

Such patterns are called “scrambling” in some models of syntax. This term could suggest that the variation is random, but, when the discourse context is taken into account, principles emerge. Mohawk constituent order is not governed by syntactic function as in English: there is no basic word order. Instead, major constituents are ordered according to their newsworthiness at that point in the discourse. Constituents are ordered in descending order of importance. Significant new information appears early, followed by progressively more predictable and incidental information.

The SV sentence ‘Wariá:nen helped me’ in (37) occurred after ‘I thought I should teach the material we worked on.’ The nod to the assistant, who was present, was deemed more newsworthy (and polite) than the fact that there was help. The VS sentence ‘But that’s how the language is, isn’t it’ followed a discussion about whether borrowed words should be included in language classes. The main point was not the language, the ongoing topic of discussion, but the fact that that is how people speak.

Clauses with object-like arguments show the same pattern. The VO sentence ‘Did you get to know old man B?’ immediately followed the remark ‘He was handsome, just like Whatisname_ B.’ In OV clauses, the O generally introduces significant information. The sentence ‘Even when I go visit my mother, I’m the one that’s trying to speak Mohawk,’ there are two object-like arguments, the mother and Mohawk. This continued the observation that people tend to veer into English.

Ordering variation is not restricted to core arguments. In (41), kari:wares ‘a long time’ occurred early, but in (42) the same word occurred late.

(41) Sahtentión:ne’ ken?
‘Have you been away?

kari:wares tkonkénhne.
it is matter long since I saw you
It’s been a long time since I’ve seen you.’

(42) Skáthne ionkenió’tekwé’ kari:wares.
together we two worked it is matter long
‘We worked together for a long time.’
The point of (41) was more the length of time than the seeing. (42) occurred just after the speaker had introduced a visitor. It provided supplementary information about the person as a coworker. Of course speakers have choices concerning what they consider the most newsworthy elements of their messages, and they do not necessarily all make the same choices.

Order has been routinized in one kind of construction: complement constructions. Normally the matrix clause occurs first, followed by the complement.

(42) Teiotohontsóhon  
    ‘We have to  
    [ne kwah teken’en ia:kaién:take’ [tsi ni: tsi ‘ionkwáthare’]]  
    the quite certainly it should be complete as so as ‘we speak  
    really be complete the way we speak.’

This routinized matrix–complement order follows an oft-cited processing motivation. In many languages, heavy complements routinely follow the matrix, no matter what the basic constituent order otherwise.

As can be seen throughout this section, our view of basic syntactic structure, the structure of the simple clause and its constituents, Determiner Phrases, would be superficial and narrow at best without an awareness of the choices speakers make through discourse.

4 Beyond the Nuclear Clause

Another set of Mohawk constructions that would be easy to miss indicate marked information structure. Some examples were seen in the discussion of pronominal forms.

One is the topicalization construction, where the speaker shifts to a new but accessible discourse topic. It is usually characterized by a left-detached topic phrase, followed by the nuclear clause with a pitch reset. The two may or may not be slightly separated prosodically or otherwise. At one point the group was discussing kinship terms. One speaker gave the words for in-laws that he used, then noted that his father’s side of the family used Tiári! to address a sister-in-law.

(44) Rake’niha ses aa,  
    he is father to me formerly HES  
    ‘My father and his family ah,  
    wahoní:ron’,  
    they said  
    they used to say

    ‘Tiári!’  
    ‘Sister-in-Law!’
Here the new topic, ‘My father,’ was separated from the nuclear clause by a hesitation marker (see Figure 1.5).

Another construction indicating marked information structure is a focus construction, whereby a constituent conveying particularly important information occurs before the nuclear clause. (45) contains a topic shift to rakhtsì’a ‘my older brother’ and a focus construction with ráonha ‘he.’

(45) A: ‘You have to be determined if you want to speak pure Mohawk. It’s too easy. You don’t even realize you’re talking English again.’

B: Rakhtsì’a tho nì:iht he is older sibling to me there so it is ‘My older brother’s like that.

‘When we get together and talk, he starts speaking English to me. And,

ráonha rakhtsì’a ī:ken wá:hi. he he is older sibling to me it is TAG he’s my older brother you know.’

Topic and focus constructions are similar in some ways. In both, an element appears before the nuclear clause. In rapid or unemotional speech they may be prosodically similar. But, in a prototypical topicalization construction, the new topic occurs in its own intonation unit, ending with a fall in pitch. There may be some separation before the following nuclear clause, which begins with a pitch reset. In a prototypical focus construction, the focused element is pronounced with extra-high pitch, but there is then a continuous fall until the end of the sentence. (In Figure 1.6, the apparent high pitch on rakhtsì’a is caused by the affricate and special tone inherent in the word rather than the construction.) An important aspect of intonation is its scalable nature: pitch may be raised or lowered to varying degrees, elements may be separated to varying degrees,
and tempo may vary in the same way. Segmental markers, on the other hand, are either present or absent. Significantly, the topicalization and focus constructions have different functions in connected speech. While the first shifts the topic of discussion to another accessible referent, the second highlights some element of the message.

There is a third construction that signals special information structure. This is the antitopic construction, used to confirm the identity of a continuing topic. The antitopic nominal follows the nuclear clause, like 'we fluent ones' in (46). It often occurs when several referents are in play, to mark the conclusion of a discussion, or to emphasize a point.

(46) A: 'We’re not conscious of it (the complexity of the language) when we’re writing. When we’re writing, that’s when we realize how smart we are.'

      B: 'And that’s why I strive to write our language correctly.'

      lə́h tekarı:wes  iáh kə:n taonsetewə:seke',
      not it is matter long not here will we still be walking around

      ne tewahrónkha',
      the we talk the lg

      'Before long we’ll no longer be here, we fluent ones.'

The antitopic is typically pronounced with lower, flatter pitch, and sometimes creaky voice. (The waveform in Figure 1.7 is slightly complicated by the overlap with another speaker.)

5 The Complex Sentence

Speakers also have choices in information-packaging at higher levels of structures. Here we consider just one set of alternatives: the expression of simultaneity.
Speakers may package simultaneous events in two separate sentences. In (47), speaker B could have said, ‘Once when I came here you didn’t have a gathering.’ But he used two grammatically and prosodically separate sentences.

(47) A: ‘Have you been away? It’s been a long time since I’ve seen you.’

B: ‘Yes, I did go away. . . .’

WAR‘kkwátha’énska.
I came here one
‘I did come here once.

Iáh ki’tesewatatítaróhrónen’e’. not in fact did you all come to get together
You didn’t have a gathering.’

He apparently chose to make an independent statement that he had come, in response to the earlier remark by A.

Two events can be expressed in separate sentences, giving each the force of a statement, but the events can be related temporally by various adverbial particles, as in (48).

(48) Toka’entewawenneríkhon.
maybe we’ll shorten our words.
‘Maybe we’ll shorten our words.

Sok ronónha’óni’enshatiwendneríkhon.
then MPL. too they’ll shorten their words again
Then they’ll shorten their words too.’

Time can be indicated in a dependent clause. The group had been discussing the grammatical complexity of the Mohawk language.
(49) Iah ki’ tetewattó:kas, [nó:nen iah teionkwahiatonhátie’].
not actually do we notice the when not are we writing along
‘We’re not conscious of it [when we’re not writing].’

Separate sentences would have conveyed a different meaning: ‘We’re not conscious of it. We’re not writing.’

Mohawk offers an additional, morphological option for expressing simultaneity. A verbal prefix sh- can indicate similarity or coincidence. Coincident clauses are generally used for background situations. The speaker below had been telling the group that she and her friend had been working together on the language for many years. She then turned to her friend.

(50) Ken’ na’tétena’s [shontetiáhsawen ki: wá’ónkeniíó’ten’] wáh’e.
small so we two were sized when we two began this we two worked TAG
‘We were just so high [when we started working on this], right?’

Oi:ri sha’teionkeniiohseriah:kon.
ten when we two winters had crossed
We were ten years old.’

The fact that the two had been working was already well established.

The development of the ó:nen ‘when’ construction in (49) can still be traced. The particle ó:nen originated as a temporal adverbial ‘at the time, then, now,’ a meaning that persists in Mohawk and related languages. Frequent juxtaposition of sentences ultimately resulted in the construction in (49): ‘He saw her. At the time, she was planting.’ > ‘He saw her when she was planting.’ Now the temporal clause may precede or follow the matrix.

6 Coherence

Particles are pervasive in Mohawk speech, but many do not occur in isolated sentences. Yet they can play crucial roles in structuring discourse. Mohawk contains a rich inventory of them, which skilled speakers use in powerful but sometimes subtle ways. Only a sample are described here.

One is né:, often translated as ‘that.’ It does not appear in the textbook examples cited at the outset, and it is in fact conspicuously absent from isolated sentences. Yet it is pervasive in connected speech. Its use can be seen in (51), originally all in Mohawk.

(51) A: Polysynthetic
B: Né: ki’ konwáiat.s.
that in fact they call it
‘That’s its name.’
A: ‘Darn but we’re pitiful, aren’t we, using these kinds of words.’

B: Né: ki’ ratina’tónhhkwá’ ne tsi

that in fact they call it by name the how

n:ioht tsi ioi’te’ (…)

so it is how it works

‘That’s what it’s called, the way it works, (the way our words are connected).

Sometimes it’s a short word with just a few connections.
And sometimes there’s a huge lot of connections.

Né: ki’ aoríwa’ tho nió’re’ tsi

that in fact its reason there so it is far how

kanontsistó’is ne kani’en’kehá:ka.

it is head hard variously the flint place people

That’s why the Mohawks are so smart.’

Né: is a discourse anaphor: it refers to a person, an object, or a whole idea mentioned previously in the discourse. The first three occurrences of né: in (51) refer to the term polysynthetic, and the fourth and fifth to the fact that the Mohawk language is so complex morphologically. The demonstrative né: permits speakers to manage the flow of information through time. An idea can be developed in one sentence or longer discussion, then integrated into a new sentence with just a word. Without extensive samples of speech in context, this small but powerful particle might never be encountered. Its antecedent is usually not in the same sentence and often not even in the same turn.

This discourse demonstrative né: is the likely etymological source of the unstressed article ne ‘the aforementioned,’ reflecting a common pathway of development cross-linguistically. In modern Mohawk, the article now shows reduction in phonological independence and substance. It is normally pronounced in the same phrase as the nominal it modifies (except before a word search), it is unstressed, and it is often contracted before a vowel-initial word: n=otsí:tsa’ ‘the aforementioned flower.’

Another particle that relates sections of discourse has developed from the demonstrative thó, literally ‘there.’ It, too, permits speakers to construct an idea over a stretch of discourse then carry reference to it into a new sentence. People were discussing the
range of meanings of the verb -atshori ‘slurp.’ In (52) the particle thó referred to the use of the verb only for soup.

(52) ‘The way I know it it’s just soup.’

Thó ki’ ní:íoht tsi wakhronkhá’ón.
there in fact so it is how I have become fluent
‘That’s how I learned it.’

(52) shows another pervasive but nearly inaudible particle, ki’. It is used to indicate that the current statement is pertinent to the preceding discourse. A rough translation might be ‘in fact,’ ‘actually,’ or ‘well.’ The particle was seen earlier in ‘This morning we did a lot of work.’

7 Interaction

Coherence is also key to successful interaction. The particle ki’ just mentioned is pervasive in conversation. It indicates that the speaker’s utterance is pertinent to the previous discussion, often a comment by another participant. One man was about to trip over an electrical cord. Speaker A’s use of ki’ in the last line marks this as a response to his question.

(53) A: Se’níkón:rarak
‘Watch out!’

B: Nah:ten enke’níkón:rarake’.
‘What should I be careful of?’

A: Wats’ ki’ tho enhsia’té:na’ne’.
wait there you will bodily come to lie
‘You might fall down.’

The same particle was seen earlier in (20) in the exchange “‘I’m not making fun of you,” “Well you’re looking at me while you’re saying that,” “Well you’re the one that’s standing close by.”

Another pervasive particle in conversation is the tag wáhe’/wáhe’. Like English tags, it is basically a request for confirmation, but it also serves a much broader range of interactive functions. It can indicate less than complete certainty. It can also be an effective tool for bringing listeners into the conversation and establishing common ground.

(54) Thó ni:íoht ne owén:na’ wáhe’.
there so it is such the language
‘That’s how the language is, isn’t it.’
It is pervasive in co-constructed narrative.

(55) Ken’ na’tétena’s shontetiáhsawen ki: wa’onkeniíó’ten’ wáhe’. small so we two were sized as we two began this we two worked ‘We were just so high when we started working on this, weren’t we.’

It is used in polite suggestions for joint action.

(56) Aetewahiatónnion ka’nón: teiotionhosóhon wáhi’? you all and I should write where it is necessary ‘We should write where it fits, OK?’

It is also used to emphasize the importance of a point, essentially requesting commitment from the listener. An example was seen earlier in (45).

(57) ‘My older brother’s like that. When we get together and talk, he starts speaking English to me. And,

ráonha rakhtsí:’a fíken wáhi’. he he is older sibling to me it is ‘he’s my older brother!’

If we hope to understand the essence of language and languages, we cannot ignore the most usual use of language: interaction. And of course tracing grammatical structure through interaction entails looking at substantial stretches of interactive discourse.

8 Conclusion

Over a long period, mainstream theories of grammar viewed language as a set of hierarchical structures whose components should be studied as autonomous systems. As technological advances have facilitated the collection and analysis of substantial bodies of connected, interactive speech, complete with the sound that carries it, it has become ever clearer that none of these components can be understood fully in isolation. Elements of each, from the smallest to the largest, play important roles in shaping discourse; discourse in turn plays crucial roles in shaping structures of each. This chapter has provided a glimpse of how much of the essence of a language could be missed if the description of it were based on isolated sentences alone. The implications for our understanding of language in general are substantial. A language is much more than a set of structural parameters. It is the entirety of how speakers choose to express themselves, to package their ideas into words, sentences, and discourse to meet their communicative and social needs.
NOTES

1 Transcription is in the standard community orthography. Most symbols represent sounds close to their IPA values. The letter <i> is a glide [j] before vowels and a vowel [i] elsewhere. Digraphs <en> and <on> represent nasal vowels [A] and [u]; apostrophe <' > glottal stop [ʔ]; the colon <: > vowel length; an acute accent <´> high or rising tone; and a grave accent what is termed falling tone <`>, actually characterized by a steep extra-high rise followed by a plunge to below the baseline pitch.


3 The following abbreviations are used: 1 first person, 2 second person, AGT grammatical agent, AL alienable possession, CISLOC cislocative, DIM diminutive, DISTR distributive, DV duplicative, EXCL exclusive, f feminine, FACT factual, FUT future, HAB habitual aspect, INAL inalienable possession, INCH inchoative, INCL inclusive, INST instrumental applicative, M masculine, MID middle, N neuter, NMZR nominalizer, NS noun suffix, OPT optative, P grammatical patient, PFV perfective aspect, PL plural, PROG progressive, PRT partitive, REP repetitive, SG singular, ST stative ASPECT, TRLOC translocative.

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