Hopi
Survey of an Uto-Aztecan Language

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Introduction

Hopi is spoken by several tens of thousands of people in the north-east part of Arizona, north of Winslow [lit.ref. 1,5,8,9]. It is a separate branch of Uto-Aztecan, having no close relatives. Other well-known Uto-Aztecan languages are Aztec, with about a million speakers in Mexico and Shoshoni/Comanche, with several thousand speakers in various places in the US.

All Uto-Aztecan languages are closely related, so much so that the relationship is obvious even to non-linguists. Figure 1 shows the structure of the Uto-Aztecan group (living languages only) [lit.ref. 6,7]. The differences in the group are comparable to those between Germanic languages: Hopi differs from Aztec about as much as English differs from German, as far as such things can be measured. It is very likely that the Uto-Aztecan languages as a group are related to the Tanoan languages (best-known representant: Kiowa), but the exact relationship is still being researched.

Hopi exists in three dialects, called 'First Mesa', 'Second Mesa' and 'Third Mesa'; the names indicate where exactly the dialects are spoken. The difference between the dialects is not larger than that between British and American English. Although Hopi is not an endangered language at the moment, present-day Hopi has absorbed a large amount of English vocabulary; this effect has been ignored in this survey. `Hopi` means '(well)-behaved' in Hopi [lit.ref. 4].

The Hopi and their language have been the subject of extensive research in the relation between language and culture [lit.ref. 3,4]. As a result of this, Hopi has gotten the name of being a very 'special' language, of almost mystical qualities. There is little in the language to justify this notion; Hopi is an average Uto-Aztecan language, with no extreme and few special features. Its often cited system for making time-related distinctions is, though not identical to that of most Indo-European languages, not unusual as languages go, and certainly stronger than that of many other languages, for example, Indonesian. One of its most striking features is its extensive set of words for spatial relations [lit.ref. 2], which include words like `tump` = *at the mesa edge*. It seems reasonable that such words come in handy when you live near precipices. This does not necessarily mean that Whorf's conclusions are wrong, but it does mean that Hopi cannot serve as the exclusive foundation. For an analysis, and mostly rejection, of the 'mesh of myths around Hopi', see [lit.ref. 4].

General structure

Like all Uto-Aztecan languages, Hopi is relatively simple. It has no tone or pitch and no ergativity; it does show some incorporation, though, for adjectives, as explained below. Nouns and verbs are modified by declensions and conjugations, though to a lesser extent than in Latin or German. The general sentence structure is subject-object-verb, but other orders are possible. Sentences often contain a particle that tells more about the message in the sentence; an example is the particle `yaw`, which indicates that the sentence is hearsay evidence ('They say ...').

The dictionary forms of very many Hopi words consist of a consonant, a short or long vowel, another consonant and finally a short vowel:

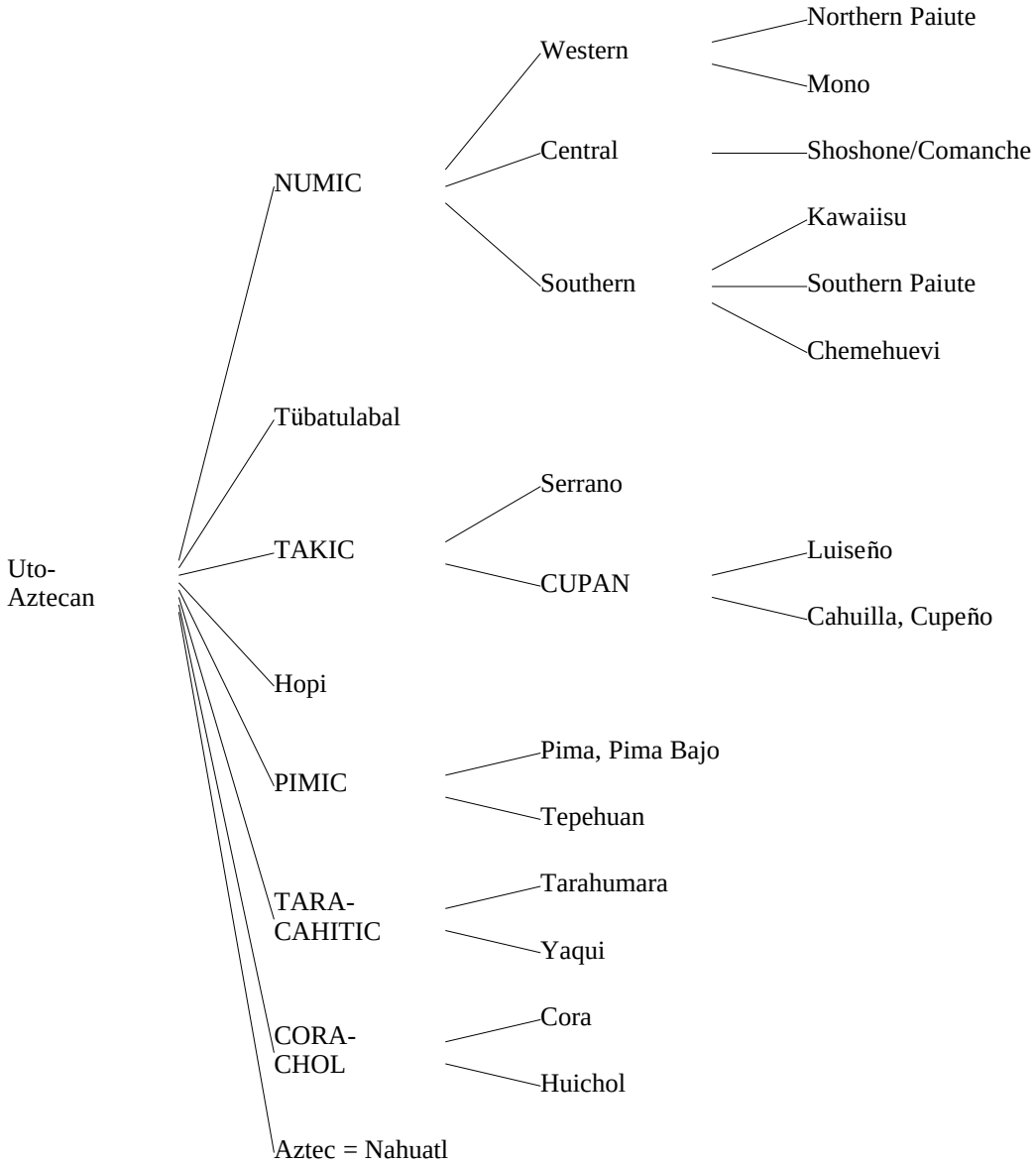

Figure 1 — Structure of the Uto-Aztecan group

`tsiro` - bird
`qööts`a - white
`kuuki` - to bite

Here the `ts` counts as one consonant, as explained below. Modified words (words that have a different form due to their function in the sentence) and 'small words' often deviate from this simple pattern, as the above word `tump` = *at the mesa edge* shows.

Many words have a special form when they come at the end of a sentence; these are called 'pausal forms'. An example is `yaw'i` from the above `yaw`: `pam put kuuki yaw'i` = *he/she him/her bit they-say = I've heard he/she bit him/her*.

Hopi has no gender distinctions; that is, there is no difference between 'he', 'she' and 'it', not even in the pronouns.

Although many modified forms can be derived from their base form by simple rules, quite a number of them are irregular, and have to be learned by heart, like the German irregular plurals or the English irregular verbs. On top of that, some modified forms bear no relation to the base form at all (as the past tense *went* from the English present *go*). An example is:

wuuti - woman
momoyam - women

Such forms are called ‘suppletive’.

Phonetic features

Hopi has six vowels, each either short or long: a, e, i and o are pronounced roughly as in Spanish or Italian, but ö and u require some explanation.

The ö is like the German *ö* but with less lip rounding. It can be produced by first pronouncing an ‘e’ as in ‘met’ and then without changing tongue and mouth position say the ‘u’ as in ‘but’. If you try this by first saying ‘ehe’ (with twice the ‘e’ of ‘met’) and then modify it to ‘uhu’ (with twice the ‘u’ of ‘but’) you give a fair imitation of the Hopi word 'öhö = *to cough*.

The Hopi u is an unrounded ‘u’. Say the English word ‘put’ while keeping the lips flat rather than rounding them. This gives you an approximation to the Hopi word put = *him/her*.

Long vowels are written doubly: aa for a long a. They are shortened automatically when they follow another long vowel: kwaahu = *eagle* but 'itáá-kwahu = *our-eagle*. (The hyphen between 'itáá- = *our-*, and -kwahu = *-eagle* is used here only to show the structure of the word; it is not written in Hopi: 'itáákwahu.)

The consonants h, k, l, m, n, ng, p, s, t, ts, w and y are pronounced roughly as in English; the ng and ts each count as one consonant. Four other consonants require some explanation:

' the ‘glottal stop’. This is the ‘break’ in the middle of the English exclamation ‘Oh'oh!’ and the German word ‘Theater’; it is also found in the London pronunciation of ‘water’ as wo'a. In Hopi it is a normal consonant, at par with p, k, etc. It occurs as the first sound of words that seem to start with a vowel; examples we have seen are 'öhö = *to cough* and 'itáá-kwahu = *our-eagle*.

q a k-like sound made further back in the throat, but not so far as the Arabic ‘qof’ . The k in the English ‘awkward’ is close.

r before a vowel: a voiced ‘sh’, as in English ‘measure’; elsewhere (before consonants and at word end) just like s; never like the English, American or Italian r.

v bilabial, as in Spanish; pronounced with the same lip positions as the English b.

The k, ng and to some extent the q have the property that they can be pronounced simultaneously with a w (‘labialized’) or a y (‘palatized’), giving rise to five new consonants:

normal	k	ng	q
labialized	kw	ngw	qw
palatized	ky	ngy	–

Again, each of these counts as a single consonant, in spite of appearances.

Hopi does not distinguish between voiced and voiceless consonants: there is no b, d, g, and although there is a v, there is no f. A p at the beginning of a word may change to v in the middle of a word: poosi = *eye, seed* turns into -vosi, for example, in sipál-vosi = *peach seed*. Likewise, the v at the end of a word is pronounced p by many speakers: 'ev or 'ep = *at it*.

Stress is normally on the first syllable, but may be on the second if there are more than two syllables, especially when the first vowel is short and the second is long: 'itáá-kwahu = *our-eagle*. When it is on the first syllable, the stress is not indicated in this text.

Nouns

In addition to a singular and a plural Hopi also features a dual, as did ancient Greek:

taaqa - a man
taaqavit - two men
taataqt - men (three or more)

The dual in -vit is regular, but the plural is slightly irregular. The original meaning of -vit is probably ‘pair of’, as also evidenced by the fact that verbs use their singular form with dual nouns.

Plurals are normally formed by appending -m: tsiro = *bird*, tsirom = *birds*; or by reduplication. In the latter process, a short form of the first syllable is repeated: taa-ta-qt = *men* from taa-qa = *man*, and kwaa-kwa-hut = *eagles* from kwaa-hu = *eagle*. If the word starts with p, this p may be softened to v in the second syllable: poosi = *eye* yields poovosi = poo-vo-si = *eyes*.

Given the unpredictable choice between -m and reduplication and the large number of small additional changes that occur in forming a plural, one has to learn the plural with each noun.

Subject and object forms of nouns and pronouns

Hopi distinguishes between subject forms and object forms, about the same way English distinguishes between 'I' and 'me' and between 'he/she' and 'him/her', except that Hopi also makes the distinction for nouns: `tiyo` = *boy(subj)*, `tiyot` = *boy(obj)*. The object form is formed by adding `-t` to base forms, but `-y` to modified forms (forms that already have prefixes and/or endings attached to them); `-y` turns into `-uy` after consonants. Figure 2 shows some examples; we see that again smaller or larger irregularities often play a role.

Subject	Object	
`kwaahu`	`kwaahut`	- an eagle
`tiyo`	`tiyot`	- a boy
`tiyovit`	`tiyovituy`	- two boys
`tootim`	`tootimuy`	- (several) boys
`hak`	`hakiy`	- who(m)
`lööyöm`	`löqmuy`	- two

Figure 2 — Examples of subject and object forms

The object form is used for the direct object ('whom'):

`Nu' kwaahut tuwa` - I saw an eagle.
I(subj) eagle(obj) saw

It is also used for the indirect object ('to whom'):

`Tiyo maana-t moosa-t maqa.`
boy(subj) girl(obj) cat(obj) gave
= The boy gave the girl a cat.

and with words that are prepositions in English but postpositions in Hopi:

`kiihu` - house(subj)
`kiihu-t 'a-qlaq` - near the house
house(obj) it-near

Note that English has exactly the same usage, as in 'he saw me', 'he gave me a book' and 'near me'. A less usual phenomenon is that the object form even pertains to words like 'and':

`moosa nöq pooko` - a cat(subj) and(subj) a dog(subj)
`moosa-t nit pooko-t` - a cat(obj) and(obj) a dog(obj)

as in:

`Tiyo maanat moosat nit pookot maqa`
boy(subj) girl(obj) cat(obj) and(obj) dog(obj) gave
= The boy gave the girl a cat and a dog

Other endings

In addition to the object case ending `-t` (or `-y`) there are a number of other case-like endings; examples are the ending `-qlaq` = *near*, which we saw above, and `-ve` = *in, on, at*. A larger sample is shown in Figure 3.

Unlike the object case ending, these endings cannot be attached to all nouns but only to the pronouns and a number of other nouns. Which nouns exactly accept which endings depends very much on the dialect and may differ from speaker to speaker. When a combination is not possible, it is replaced by the object form of the noun, followed by the ending attached to the form `'a-` which refers to the last mentioned item and can roughly be translated as 'it': `kiihu-t 'a-qlaq` = *house(obj) it-near = near the house*.

These endings all have something to do with location; the resulting form can also be used predicatively, that is, instead of the verb in the sentence:

-ve	- in, on, at
-peq	- in, at
-ng	- around, on
-qlaq	- near
-ngaq	- from
-mi	- to
-meq	- towards
-nawit	- through
-tsva	- above, over
-tsveq	- on top of
-tpiq	- under
-tpipaq	- beneath
-mum	- with (accompanying)

Figure 3 — A sample of location endings

paasa - field
Pay pam pas-ve. - He is in the field.
really he field-in

Pronouns

Hopi distinguishes the same classes in its pronouns as English: three persons, singular and plural. There are no dual forms for the pronouns. The pronouns have three different forms, one for use as a subject, one for object and one for use with a postposition; the forms are collected in the table in Figure 4 and 5. We see that the object forms again end in -t or -(u)y, with the exception of 'ung = *you(obj)*.

Subject		Object	
nu'	- I	nuy	- me
'um	- you	'ung	- you
pam	- he/she/it	put	- him/her/it
'itam	- we	'itámuy	- us
'uma	- you all	'umuy	- you all
puma	- they	pumuy	- them

Figure 4 — Subject and object forms of the pronouns

Pronoun	Example	
'inú-	'inúqlaq	- near me
'u-	'uqlaq	- near you
'a-	'aqlaq	- near him/her/it
'itámu-	'itámuqlaq	- near us
'umú-	'umúqlaq	- near you all
'amúú-	'amúúqlaq	- near them

Figure 5 — Forms of the pronouns used with other endings

Possession forms

Rather than using possessive pronouns like the English ‘my’ and ’your’, Hopi uses prefixes and postfixes to indicate possession:

moosa - a cat

'imóósa - my cat
'uumosa - your cat
moosa'at - his/her cat

'itáámosa - our cat
'umúúmosa - your cat
moosa'am - their cat

We see that the first and second persons, both singular and plural, use prefixes and the third person uses postfixes. We also see the effect of the rule that a long vowel changes to a short one after a stressed long vowel: the originally long vowel in moosa = *cat* shortens to o in several of the forms.

The endings -'at = *his/her* and -'am = *their* are actually separate words meaning 'of him/her' and 'of them'. In the object form both the word and the ending gets the object marker: moosayatuy = *his/her cat(obj)*. The object forms of the other possessive forms are formed regularly by adding -y: 'imóósay = *my cat(obj)*.

The third person possessive forms are also used when the owner is named explicitly, as in 'the girl's cat': maanat moosa'at = *girl(obj) cat-her = the girl her cat = the girl's cat*. We see that for the owner the object form is used, as in the non-standard English 'him his hat'; the literal equivalent is actually correct Hopi: put pitánaktsi'at = *him hat-his*.

The formation of the plural through reduplication has already shown us that the first syllable of the usual two-syllable word plays the more important role. We also see this in the formation of the possessive forms of a few nouns: these nouns lose the second syllable entirely. One of these words is kiihu = *house*; its first person possessive form ('my ...') is 'iki = *my house*. Three changes have occurred here after prefixing 'i- = my: first the last syllable is dropped yielding *'ikií; then the stress, which in Hopi cannot reside on the last syllable moves to the front: *'íkii; and lastly the long vowel loses its length since its has lost its stress: 'íki = *my house*.

The possessive suffixes -'at = *his/her* and -'am = *their* generally do not cause this loss of the last syllable: kiihu'at = *his/her house*.

The possessive forms of a few words, mainly kinship terms, are downright irregular; an example is: 'ingu = *my mother*, yu'at = *his/her mother*. Kinship terms cannot be used without a possessor: there is no stand-alone word for 'mother'.

Most kinship terms have special forms when used to address someone (a 'vocative'): yuuyu = *mother!* Again these can be irregular: 'ina = *my father*, na'at = *his father* and taata = *father!*

Noun formation

Hopi has several endings for noun formation; a very productive one is -pi for 'place' or 'tool': 'uutspi = *door, cover* from 'uuta = *to close*, or yamakpi = *bridge* from yama(k) = *to cross*. This ending is also useful for creating words for modern gadgets: tuu-vahom-pi = *something-wash-tool = laundry machine* from vahoma = *to wash*.

Adjectives

Hopi adjectives have two forms, one to be used predicatively (as the verb in a sentence) and one to be used attributively (directly together with a noun). The first is a separate word, the second is a prefix to the noun. Examples are: qööts i / qötsá- = *white* and wuuyoq'a / wukó- = *big*. They are used as follows:

Moosa qööts i. - The cat is white.
qötsámosa - the white cat

'iki wuuyoq'a. - My house is big.
'iwúkoki - my big house (= 'i-wuko-ki)

We see that the form of the noun is reduced when it is used with a prefixed adjective: moosa = *a cat* becomes -mosa = *a ... cat*, and kiihu = *house* becomes -ki = *a ... house*. Some nouns even change further: pooko = *a dog* turns into -voko = *a ... dog*, as in qötsávoko = *a white dog*. Adjectives can be added one on top of the other: wukó-qötsa-voko = *a big white dog*; and they can be negated using qa- = *not*: qahopmosa = *naughty cat*, which is subdivided thus: qa-hop-mosa = *not-well-behaved-cat* (from hopi/hop- = *well-behaved*).

The adjective 'little, small' is rendered by an ending, -hoya, comparable to the German ending -chen as in German *Blümchen = little flower* from German *Blume = flower*. In Hopi we have for example: qötsámomoshoyam = *little white cats*, which is structured thus: *qötsá-moo-mo-sa-hoya-m = *white-cat-(reduplication)-little-(plural)*. (Note that the -sh- is not the English 'sh' but rather an s followed by an h.)

Verbs

Hopi has basic verbs and derived verbs. The basic verbs have the usual form of a Hopi word and consist of two open syllables, the first with a short or long vowel and the second with a short vowel; examples are:

peena - [to] paint, [to] have painted
qatu - [to] sit (person)
nöösa - [to] eat, [to] have eaten
puuwi - [to] sleep, [to] have slept

As may appear from the translations, these basic forms emphasize the result of the action rather than the action itself; the form does not imply when the action happened. This is one of the conceptual differences between Hopi and West-European languages; as we shall see below, however, Hopi has special forms to emphasize the action. Also, the above forms are not infinitives, as the English translation would suggest, but rather forms for a singular subject:

nu' peena - I have painted
'um peena - you have painted
pam peena - he/she/it has painted

Plural verb forms

Verb forms do not differ for first, second and third person, but different forms are used for singular and several. We use the word 'several' here rather than 'plural', since 'two' counts as singular as far as verbs are concerned; 'two' is considered 'a pair' and is therefore a singular unit. To avoid awkward expressions we shall use the term 'plural' here with the meaning 'verb form for several subjects'. The regular plural ending is -ya, to be added immediately after the basic form, but reduplication and suppletion are frequent:

peenaya - [to] have painted (plural) (regular)
nöönösa - [to] have eaten (plural) (by reduplication)

yeese - [to] sit (person) (plural) (by suppletion)

Indeed the last item shows no relation to qatu = *sit (singular)*.

These forms are used with all plural ('several') subjects:

'itam peenaya - we (a group) have painted
'uma peenaya - you (a group) have painted
puma peenaya - they (a group) have painted

but the same plural pronouns with a singular verb imply that there are exactly two persons involved:

'itam peena - we two have painted
'uma peena - you two have painted
puma peena - they two have painted

Standard verb forms

There are four important verb forms that occur in most verbs; they indicate result, duration, future (expectation) and command, as summarized in Figure 6. The regular endings are shown, together with an sample verb, but it is difficult to find a fully regular verb.

	regular endings		examples	
	singular	plural	singular	plural
result	-	-ya	peena	peenaya
duration	-ta	-yungwa	penta	pentota
future	-ni	-yani	pentani	pentotani
command	-'(vowel)	-ya'a	peena'a	peenaya'a

Figure 6 — The four basic verb forms in Hopi

The duration form is often completely different from the result form, and may again differ for singular and plural:

nöösa - [to] have eaten, [to] eat to dispel hunger
tuumoyta - [to] be eating alone or with two (as activity)
noonova - [to] be eating in a group (as activity)

Clearly eating to get fed and eating as a social activity are viewed as completely different affairs.

The future form (in `-ni`) is probably the most regular verb form, although it still has its effect on the basic verb form:

`nööso` - [to] eat, [to] have eaten
`nösni` - will eat

The singular command is formed by adding a glottal stop `'` and repeating the last vowel of the word:

`Kiihut peena'a!` - Paint the house! (to one person)

The same process yields the plural command:

`Kiihut peenaya'a!` - Paint the house!
(to several persons)

The k-conjugation

A small number of verbs originally had an ending `-ku`, which drops off or reduces to `-k-` in most forms; this phenomenon is called the 'k-conjugation' in Hopi grammars. An example is:

`wari` - [to] run (`-ku` drops off)
`warikiwta` - [to] be running (`-ku` changes to `-ki-`)
`warikni` - will run (`-ku` reduces to `-k-`)
`wariku'u` - run! (`-ku` remains)

(Mind the pronunciation 'wázhi' for `wari`!)

Derived verbs

Hopi has a large number of 'derived' verbs, which are derived from basic verbs by adding endings. Examples are:

`peenilti` - [to] be painted (regular ending `-ilti`)
`peenangwu` - [to] paint regularly (regular ending `-ngwu`)

`qatsi` - [to] sit (thing)
`puwva` - [to] fall asleep
(regular ending `-va` = [to] begin)

We see that some endings cause small modifications in the basic forms of the verbs; this kind of irregularity pervades all of Hopi. (The noun `qatsi` = *sitting, living, life* occurs in the film title *Koyaanisqatsi*; the first part is the attribute `koyaanis-` = *out of balance, corrupted*, which must be compound but is of unclear composition.)

There are several dozen endings for forming new verbs; Malotki [lit.ref. 2] gives an exhaustive list. Some will be considered here, but there are many, many more.

An interesting ending is `-'ta` (or `-y'ta`); it is added to a noun *N* and gives a verb meaning 'to have an *N*'. Hopi has no verb for 'to have' and possessing a thing is seen as a duration activity derived from that thing:

`moosa` - a cat
`Nu' moosa'ta.` - I have a cat.
(= I am-doing-cat-having)
`'itam moosa'ta.` - We two have a cat/cats.
`'itam moosa'yungwa.` - We (several) have a cat/cats.

Since the `-ta` in `-'ta` indicates a duration form, its plural is `-'yungwa`, as per Figure 6.

Other important endings are `-to` which indicates the intention to do something:

`tu'i` - [to] buy
`Pam moosat tu'ito.` - He went to buy a cat.

and `-ngwu` to indicate habit:

`Nu' palamorit nösngwu.` - I always eat red beans.

(from `paala/pala-` = *red* and `mori` (singular!) = *beans*).

The form in `-ngwu` is also used to state general truths ([lit.ref. 2], page 351):

Yanti-ngwu hapi, hak nukpana-nen
This-way-always really, somebody evil-when
= That's how it goes when somebody is evil

In addition to the endings there are a few prefixes; an example is naa- = *themselves, each other*:

kuuki - [to] bite
naakuuki - [to] bite each other

This prefix is not restricted to verbs and can also be applied to nouns:

'itam naa-hay-ve kanél-ki-'ta.
we (each-other)-neighbourhood-in sheep-house-have
= We have our sheep folds close together.

Sentence particles

An important ingredient in the Hopi sentence is the sentence particle. Although sentence particles are not unknown in English ('however' and 'just' are examples), their use in Hopi is much more wide-spread. The examples in Figure 7 use the following particles; not all of them have meanings that are easy to describe.

qa - not
kye - probably
'as - it did not really happen; it is no longer true; in vain
yaw - this is hearsay evidence; they say ...
kur - I conclude this from evidence I have seen; evidently
pay - this is the information I think you want
(generally not translated)
sen - I wonder if ...; perhaps

Pam qa moosat tu'ito	- He did not go and buy a cat
Pam kye moosat tu'ito	- He probably went to buy a cat
Pam 'as moosat tu'ito	- He went to buy a cat (but did not succeed)
Pam yaw moosat tu'ito	- They say he went to buy a cat
Pam kur moosat tu'ito	- Evidently he went to buy a cat
Pam pay moosat tu'ito	- He went to buy a cat (that's what he did)
Sen pam moosat tu'ito	- I wonder if he went to buy a cat

Figure 7 — Examples of sentence particles

The particle 'as is used in many senses all of which have to do with 'not being so now'; often the English translation uses a past tense:

Kuuyi muki.	- The water is hot.
Kuuyi 'as muki.	- The water was hot (but isn't any longer).
Pam kiihut peenani.	- He is going to paint the house.
Pam 'as kiihut peenani.	- He was going to paint the house (but didn't).

The pausal form Qa'e of the particle qa = *not* means 'No'; 'Yes' is Owí (with stress on the last syllable!).

Syntax

The normal word order in Hopi is subject-object-verb, as can be seen from the above sentences. Another very usual form is subject-noun-postposition, which describes a situation concerning the subject; English requires a translation with 'is' and/or other verbs:

Pam tutúqay-ki-mi'i. - He is off to school.
he learn-house-to(pausal)

This form is very similar to German *Er ist zur Schule. = he is to school.*

Subordinate clauses

In addition to main clauses Hopi has several kinds of subordinate clauses. Subordinate clauses are marked by special endings to the verbs; the unusual thing here is that these endings depend primarily on whether the subject of the main clause and that of the subordinate clause are the same. If the subjects are not the same (that is, if there is a change of subject), the ending is `-q` in almost all cases; if the subject is the same, many endings are possible to express many different relations.

To express that something happened before something else, we can use the ending `-t` = *after* if both subjects are the same:

`Nu' pakí-t pu' qatuvtu.`
I enter-after then sat-down
= I came in and sat down.

but when the subjects differ, `-q` is indicated:

`Nu' pakí-q pu' pam qatuvtu.`
I enter-(subject-switch) then he/she sat-down
= When I came in he/she sat down.

where 'subject switch' can be read as 'and now about somebody else'. Note that in the first sentence the subject (`nu'` = *I*) is not repeated, while two different subjects occur in the second sentence (`nu'` = *I* and `pam` = *he/she*).

If an event not only occurred before another but also caused the other, we have `-qe` (or `-qay`) = *because* if the subjects are the same, but the ending is again `-q` if the subjects differ:

`Nu' put tuwa-qe pu' waaya.`
I him see-because then ran-away
= Because I saw him, I ran away.

`Nu' put tuwa-q pu' pam waaya.`
I him see-(subject-switch) then he ran-away
= Because I saw him, he ran away.

Because the latter sentence can also mean 'When I saw him he ran away', the causal character of the sentence can be stressed by using `'oovi` = *therefore* instead of `pu'` = *then*:

`Nu' put tuwa-q 'oovi pam waaya.`
I him see-(subject-switch) therefore he ran-away
= Because I saw him, he ran away.

Note: the verb `waaya` = *to run away* is not the plural of `wari` = *to run* in spite of its looks, but an independent though probably related verb. The plural of `wari` is `yuutu` = *to run in a group* while that of `waaya` is `watqa` = *to run away as a group*. Many of the common verbs are irregular to this extent.

The form in `-qe` = *because* is also used when the causal relation is very weak and is then often equivalent to English 'that' (or is left out):

`Nu' wuuwa-qe nu' kaphe-t-ni.`
I think-that I coffee(obj)-will
= I think [that] I'll have a coffee.

Conditional clauses, which in English start with 'if', use two different endings in Hopi, depending on whether the condition is that somebody *does* something (`-e'` = *if ... does ...*), or *is* something (`-ne'` = *if ... is ...*):

`Nu' put tuw-e' pu' waayani.`
I him see-if then run-away-will
= If I see him, I'll run away.

`'um 'as wuupa-ne' haalay-ni.`
you but-not-really tall-if, be-happy-will
= If you were tall, you would be happy.

in which the particle `'as` = *but-not-really* in the second sentence points out that the addressed person is in fact not tall.

If the subjects in the two sentences differ, the endings are `-q` (as usual) for the action, but `-nöq` for the situation:

Nu' put tuwa-q pu' pam waayani.
I him see-(subject-switch) then he run-away-will
= If I see him, he'll run away.

'um 'as wuupa-nöq nu' haalay-ni.
you but-not-really tall-(subject-switch), I be-happy-will
= If you were tall, I would be happy.

When we compare the first of these two sentences to the sentence

Nu' put tuwa-q pu' pam waaya.
I him see-(subject-switch) then he ran-away
= When I saw him he ran away.

we see that the only difference between them lies in the use of the future tense in the first (waayani = *will run away*) and the result tense (waaya = *ran away*) in the second.

Each of these endings has a pausal form, which is used when the subordinate clause ends the sentence, as for example in:

Pam waaya nu' put tuwa-q'ö.
he ran-away I him see-(subject-switch)
= He ran away when I saw him.

The subordinate endings are summarized in Figure 8.

Normal	Pausal	
-t	-t'a	- after (same subject)
-q	-q'ö	- general subject switch
-qe	-qa'e	- because (same subject)
-ne'	-ne'e	- if ... is ... (same subject)
-nöq	-nöq'ö	- if ... is ... (subject switch)
-e'	-e'e	- if ... does (any subject)

Figure 8 — Summary of the subordinate verb endings

Relative clauses

Relative clauses are subsentences that say something about a noun in the main sentence; in 'the man who sold the moon' the part 'who sold the moon' is a relative clause to 'the man'. Relative clauses in Hopi look confusing at first sight. The reason is that they use a number of endings that are very similar; also, one of the endings is -qe which also means 'because', as described above.

The situation is still fairly simple when the noun concerned is the subject of the relative clause; such clauses start with 'who' or 'that' in English. Here the relative clause is represented by an 'actor noun', a noun for the person who does something. For example, the phrase 'the dog that bit the cat' is rendered as something close to 'the dog the cat-biter': pooko moosat kuukiqa, in which the verb kuuki = *to bite* yields the actor noun kuukiqa = *biter*. This construction can be the subject of the main sentence, as in:

Pooko moosat kuukiqa waaya.
dog(subj) cat(obj) bite-r(subj) ran-away
= the dog the cat-biter ran away
= The dog that bit the cat ran away.

or be an object in it:

Nu' pookot moosat kuukiqat ngöyva.
I dog(obj) cat(obj) bite-r(obj) chased
= I chased the dog the cat-biter
= I chased the dog that bit the cat.

In the phrase 'the dog that the cat bit', however, the dog is the object of the relative clause and the cat is its subject. Remarkably, the same ending -qat is used here: pookot moosa kuukiqat = *the dog that the cat bit*, which is kind of difficult to explain, since the translation of kuukiqa = *biter* no longer applies.

Again, this form can be the subject or an object in the main clause. If it is the subject, a conflict arises: the form pookot = *dog(obj)* is definitely an object form (which is correct for the relative clause), but it should be the subject form (pooko = *dog(subj)*) to figure as a subject in the main clause. In the end the object form wins out:

Pookot moosa kuukiqat waaya.
dog(obj(subj)) cat(subj) biting-him(obj) ran-away
= The dog that the cat bit ran away.

When the form is used as an object in the main clause, this conflict does not arise, since now the dog is an object in both clauses:

nu' pookot moosa kuukiqat ngöyva
I dog(obj) cat(subj) biting-him(obj) chased
= I chased the dog that the cat bit

but here another complication may occur: the subjects of the main and relative clauses may be the same, as in 'the cat chased the dog that it (the cat) had bitten'. In this particular situation, Hopi uses the ending -qe (or -qay), which we have already met above:

Moosa pookot kuukiqe ngöyva.
cat(subj) dog(obj) biting-him chased
= The cat chased the dog that it had bitten.

Note that this could also mean 'Because the cat bit the dog, it (the cat) chased it (the dog) away', but that is a much less reasonable sentence. If the meaning 'because' was really intended, it would be emphasized by using 'oovi = *therefore*: moosa pookot kuukiqe 'oovi ngöyva.

A third possibility is that the noun concerned is the object of a postposition in the relative clause, as in the English 'the man to whom I sold the moon'. In this case Hopi uses no relative clause at all but a subordinate clause, with a verb form ending in -q, since a subject switch is involved:

Pam maana tiyo a-mum nima-ngwu-ni-q'ö.
she girl boy her-with (go-home)-always-will-(subject-switch-pausal)
= This is the girl the boy goes home with

in which the combined verb suffixes -ngwu-ni, denoting habit and future, convey the meaning 'now and always'.

Numerals

The numerals are shown in Figure 9. The first four numbers have separate forms for the object; these are also used with the possession verbs forms ending in -'ta:

'itam paykomuy moosa'ta. - We have three cats.
we three(obj) cat-have

The object forms are also used to create ordinal numbers, for which Hopi has no separate forms:

paykomuy 'ev nii-qa - the third
three(obj) it-at be-er (= that which is at three)

The form for 'thirty' means 'three times ten': pay-iv pakwt = *three-times ten = thirty*. The form for 'eleven' means 'ten having one in addition': pakwt suk siikya'ta = *ten one(obj) addition-have*, in which suk is the object form of suukya' = *one*. This construction is used for all compound numbers to 100, for example:

Numerals

	Subject form	Object form
1	suukya'	suk
2	lööyöm	löqmuy
3	paayom	paykomuy
4	naalöyöm	naalöqmuy
5	tsivot	
6	navay	
7	tsange'	
8	nanalt	
9	pevt	
10	pakwt	
11	pakwt suk siikya'ta	
12	pakwt löqmuy siikya'ta	
...		
20	sunat	
30	payiv pakwt	
40	naalöv pakwt	
50	tsivotsikiv pakwt	
60	navaysikiv pakwt	
70	tsange'sikiv pakwt	
80	nanalsikiv pakwt	
90	peve'sikiv pakwt	
100	pakotsikiv pakwt	

Figure 9 — Numerals

naalöv pakwt pevt siikya'ta - 49
four-times ten nine(obj) addition-have

We can recognize the prefix naa- = *self/again* in naalöyöm = *again-two* = *four*, in navay = *naa-pay = *again-three* = *six*, and in nanalt = *naa-naa-löy-t = *again-again-two-plural* = *eight*.

The Third Mesa dialect of Hopi has separate words for the numbers from eleven to nineteen:

11	pövö'ös	16	suukop
12	'öösa'	17	rookop
13	pangáqap	18	payúkop
14	pööpap	19	narúkop
15	paaptsivot		

Here we can recognize ‘fifteen’ as ‘three times five’: paaptsivot = paa-p-tsivot = *three-times-five* = *fifteen*.

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