THE HOPI LANGUAGE, TOREVA DIALECT

BENJAMIN LEE WHORF

1. INTRODUCTORY

§1. Hopi is a Utaztecan (Uto-Aztecan) language spoken in several pueblos on the Hopi Reservation in northwest Arizona and by a scattering of Hopis at Winslow and other places off the Reservation. There are perhaps 2000 speakers at present and the number is increasing. There are at least four slightly differentiated dialects named by the writer thus: Polacca at the eastern pueblo of Walpi and that vicinity; Toreva (e as in *we*) at the central pueblo so named, its older name being mosáŋnevi, Anglicized as Mishongnovi; Sipaulovi (usually but incorrectly Shipaulovi) at that central pueblo close to Toreva;[1] and Oraibi at that western pueblo, several nearby villages, and the still further western village of Moencopi. Toreva, with fewer speakers than Polacca or Oraibi, on the basis of available data seems to be the most archaic and phonetically complex dialect, though Oraibi has some archaisms it lacks.

§2. The writer's studies have been made over several years with Mr. Ernest Naquayouma, a Hopi of Toreva long resident in New York City, with the aid of funds supplied by the Committee on Native American Languages of the American Council of Learned Societies, checked by a field trip to Toreva and the other dialect regions made with his own funds. He wishes to express his thanks to the Committee, and to Mr. Naquayouma, to whose excellence as an informant he is much indebted.

§3. Hopi is an "inflectional" language with many specialized parts of speech and a technique partly analytic and partly synthetic, the latter largely of suffixation with suffixes often fusing together but seldom fusing with the stem, and with a moderate degree of stem-alteration by stress shift and change or elimination of the final vowel, and a very little prefixing. There is little use of derivation and much of compounding, usually of not over two lexemes, lexemes not occurring free are infrequent, and there is a rich vocabulary of unit-meaning words. Phonemics is rather complex, process phonology fairly simple, with little sandhi or other mechanical changes. Morphology is complex, that of the verb extremely so, with great wealth of modal, aspectual, and voice nuances. A peculiar and distinctive system of ideas, a high degree of integration in terms of this ideology, and an ever-present delicate precision and subtlety of expression, hard indeed to capture and present in a brief

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[1] There are a few other central villages of as yet undetermined dialect affiliation.

survey, should be mentioned to complete this introductory picture of a peculiar and remarkable language.

2. PROSODICS

§1. Syllabic structure. Syllables are of the types CV, CVC, and uncommonly CVCC subject to a very limited number of ·CC combinations. Thus there is fairly common occurrence of unlimited intersyllable clusters C·C within and between words, while intersyllable CC·C occurs uncommonly between words and rarely and in very limited forms within words. Between adjacent consonants within words (except in certain combinations, e.g., voiceless continuant plus stop) there is open transition, i.e., a murmur-glide between the consonants, while in clusters made by adjacent words there is closed or silent transition. Words may have any number of syllables up to seven or eight, or rarely more, but two, three, and four syllables are most common.

§2. Stress. There are three general levels of force-and-pitch stress, not fixed registers but rather varying with the length of the word: high (', or unmarked), middle (`), and low (unmarked). It is convenient to class the first two as firm stress.[2] A word of three or more syllables may have all three, or certain combinations of any two. A dissyllable has high and low, or middle and low, or two high; when unmarked, high followed by low is to be understood, this type being vastly pre-ponderant. A monosyllable has either high (unmarked) or middle (marked) but in this case there is no contrast between middle and low, the middle-stressed mono-syllable being often no louder than the low syllable within a word. High has maximum force and moderately high even pitch, or high pitch falling before a pause; middle and low have about the same low pitch but middle has the greater force.

§3. Vowel-length. Low syllables have only one length, short. Firm syllables may contain vowels of three lengths: long, and two varieties of short (or rather nonlong); medium, which is half-long with a decline of force before any following consonant, and clipped, which is short and staccato, interrupted at full force by the closure of the following consonant, and not occurring in word-final vowels.[3] Clipped vowels are marked thus (a̮), long vowels (a·), others are unmarked. Length and stress are mainly independent, though partly interconnected by features of prosodic or rhythmic patterns of which each word has its own. While subject to changes incidental to morphology, these patterns are essentially fixed in the mor-phemes composing words, and are not governed by any simple, "mechanical" principle. This is true of stress as well as of length, though the feature of one high stress on the first, or the second nonfinal, syllable of a word may be considered "normal."

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[2] The low level is what is often called unstressed or lacking stress, according to which ter-minology my "firm stress" is merely "stress."

[3] The "clipping" of these vowels is Trubetzkoy's "Silbenschnitt."

3. PHONEMICS

§1. Consonants.

a. Table of Phonemes

	Labial	Alve-olar	Alve-olar Affri-cate	Pre-palatal and Palatal	Labial-ized Palatal	Velar	Glottal
Stops (fortis unaspirated)	p	t	c	k (ķ)	kʷ	q	
Preaspirates (fortis pre-aspirated)	ʻp	ʻt	ʻc	ʻk	ʻkʷ	ˌʻq	
Continuants −nasals	m	n		ɲ	ŋʷ	ŋ	
−vibrants	w v	l	s r	y			
Desonants (voicelsss con-tinuants)	W M	N L		Y		Nˌ	
Laryngeals							h ʔ

b. Allophones (positional variants)

Phoneme	Syllable-initial Allophone		Syllable-final Allophone
c	[tsʸ] (palatalized)		[ts]
v	[v] (voiced)		[f] (voiceless)
r	[r] (voiced)		[R] (voiceless)
	before a, ɛ, i	before e, oᴺ	
k	[kʸ]	[k]	[k]

It is thought that the above symbols will be self-explanatory with these added notes: ķ is ordinary k before a, found only in Spanish loan-words; v is unrounded and varies freely between bilabial and labiodental, r is untrilled, retroflex, and slightly spirantal. The preaspirates occur only syllable-initial after a firm-stressed vowel and the desonants only syllable-final; these sounds are phonemically distinct from the plain stops and the continuants, which also occur in these positions. Consonants other than the preaspirates and desonants occur in all positions.[5]

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[4] Before ö, k does not occur.

[5] The desonants are not found in Sipaulovi and perhaps other dialects, being replaced by the voiced continuants. The preaspirates do not occur in Sipaulovi or Polacca, being replaced by plain stops, preceded by long vowels. In Oraibi the preaspirates do not exist as single phonemes but are represented by h plus stop, h occurring freely before all consonants in Oraibi, whereas in Toreva h-clusters are very rare, and when they do occur, obviously something different from the preaspiration.

§2. Vowel Phonemes.

Vowel Allophones (governed by vowel-length)

	Long	Medium and Low-syllable	Clipped Norm
a	[a]	[a]	[a]
ε	[ā]	[ε]	[ε]
e	[ē to ɪ̄]	[ē to ɪ̄]	[ɪ]
o	[oʊ]	[oʊ]	[u]
ō	[ō]	[ō]	[ū]
		CV syllable CVC syllable	CV syllable CVC syllable
i	[i]	[i] [i to ɪ]	[i] [ɪ]

The clipped norms are altered by adjacent consonants as follows: labial C[i] > [ɪ] k or y|a] > [ā, ε] [a]k > [α] [ü]q > [ö, ɔ].

Also [ē] is shifted by preceding labial toward or to [ɪ̄], and nonlong i sounds as [ɪα] before q. It is thought that the timbres indicated by the allophonic symbols will be sufficiently clear, with these notes: ē, mid-back-unrounded, approximately vowel of American English "learn" without the r-glide; ɪ̄, high-back-unrounded; i, Welsh u or Polish y, between ē and ɪ; ō, nearly as in French "neuf"; ü, nearly as in German "Mütter"; α, as in "up."[6]

4. MORPHOPHONEMICS

§1. Table of Grammatical Techniques or Processes.

Incremental	Internal	Tactical
1) suffixing (very common)	4) iotization (ablaut of stem-final V to i)	8) order of morphemes
2) prefixing (occasional)		a) compounding
3) reduplication	5) length-change (occasional)	b) word-order patterns
a) of stem-initial CV-.	6) stress-shift	
b) of stem-final -CV.	a) of high from stem-initial to stem-final	Each process is frequently accompanied by one or more of the others
c) of word-final V	b) regression of high to preceding word or syllable	
	7) contraction (defined below)	

§2. A word may be said to be in secondary form if in its structure it exemplifies these processes in contrast with a related form (simplex, or primary form) that

[6] The symbol e was chosen for the phoneme which has the sounds ē, ɪ̄, etc. as an experiment in the freedom of symbolism such as seems desirable to the author, having the advantage of representing an extremely common vowel by a familiar letter instead of loading texts with unfamiliar signs and diacritic marks.

does not. These processes result in changing the phonetic surroundings of some of the phonemes of the primary form, and as this happens the allophones of such phonemes change to accord with the new conditions. In addition phonemes themselves are sometimes altered to other phonemes or lost. Thus k is assimilated to an adjacent q, and secondary i (from iotization) changes a preceding primary t to c, except in the suffix -ta which becomes -ti. Many of these morphophonemic alterations are too limited in scope to justify detailing in this survey. Some are indicated by special symbols explained in the grammatical treatment hereinafter. The alterations of phonemes by adjacent phonemes are too infrequent to justify saying that the language shows external or internal sandhi, except when the qualification "to a very small degree." The following alterations however are of wide and regular occurrence:

§3. Elision. When stress-shift would cause a clipped vowel not in the first syllable to have low stress, that vowel is elided in the form with shifted stress. Sometimes a medium vowel can be thus elided optionally. In the first syllable of a word the vowel merely loses the clipping. If, however, elision would cause a cluster of more than two consonants the stress-shift cannot occur in that manner.

§4. Contraction. This process applies only to certain morphemes in the lexicon, called contract morphemes, a very large class. In primary form such a word or element ends in a vowel; in contracted form this vowel disappears, and any high-stressed long vowel in the preceding syllable shortens to medium. The secondarily final consonant if a continuant becomes the corresponding desonant when adjacent to a voiceless stop. In clusters resulting from any other process than contraction (elision for example) continuants are not desonantized. The nasals ɲ, ŋ, ŋʷ all contract to the form ŋ and desonantize to N̦.

§5. Deaspiration. Preaspirates often occur in primary forms, and when the processes yielding a secondary form would move them out of their bounds (specified in III, §1. c) they become the corresponding plain stops, except for ʻp going into syllable-final, when it becomes v.[7]

§6. Lenition. Primary initial p becomes v when it becomes internal to a word or when the word is preceded by another word used as an adjectival or an incorporated verbal modifier, with certain exceptions that need not here be given.

5. WORD CLASSES AND GENERAL SYNTAX

§1. The Hopi lexicon is divided into many selective classes, for which the terms lexeme classes, or parts of speech, are convenient. They are covert classes, i.e., sentences are common in which there is no distinguishing mark of a word's class, either in the form of the word or in that of the sentence. Thus in pạm lɛ·na "that one is a flute" and pạm pɛ·na "that one writes it," there are no characteristics that would enable one to say, from these sentences alone, that lɛ·na is a noun

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[7] Preaspiration occurs secondarily and rather irregularly in certain reduplications, prefixations, and suffixations, where it will be indicated in the grammatical formulas by the symbol ·ʻ.

and pɛ·na a verb. But other sentences are common in which lɛ·na bears inflections impossible for pɛ·na, and vice versa. These parts of speech include paradigmatic ones, pronouns, nouns, verbs, and ambivalents, which have extensive systems of inflection; and an analytic group, words which have either no inflections or few or irregular ones. Distinctive traits of word order or word accompaniment, as well as rather strongly marked types of meaning, break up this analytic group into the classes: adjectives, numeratives, indefinitives, interjections, locators, temporals, tensors, modalizers, particles, and conjunctions. It may be convenient to call all but the first four adverbs. The ambivalents partake of both noun and verb nature and can take either inflectional system, but the verb nature is paramount and the verb system preferred. The noun, including the ambivalent in its noun capacity, can be used like an adjective to modify another noun, but an adjective cannot be used as a noun. The locator class overlaps pronouns, most of these words being special uses of case-inflected pronominal bases with or without various bound morphemes. These uses are mostly as postpositions, and when it is convenient the locators will be so termed.

§2. A sentence may be roughly defined as an utterance that may be followed by a long pause without sense of incompleteness. A major sentence is intelligible in itself, e.g., "the man ran"; a minor sentence is intelligible in a recently occurred context, e.g., "yes," or, "a man" in reply to a question "what is that?" A word, in Hopi, may be defined as either a minimal major or minor sentence, e.g., wari "he ran," ta·qa "a man," or a sentence-element of the same juncture-type[8] and lexeme class as such a word. Hopi has two types of major sentences and clauses.[9] A verbal sentence contains a verb, which is the predicative word and occurs usually last, but often medially. A nonverbal sentence has no verb, and the predicator is the last word, which may be of any class except for a few of the analytics. Locators, adjectives, and nouns, in this order, are the frequent predicators, others are occasional. These frequent types express position or motion, qualities denoted by adjectives, like "is red," and predication of a noun, e.g., "is a man." There are no verbs meaning be, have, go, or come. "Be" is the translation of the nonverbal predication when there is no motional meaning. "Have" is expressed by a verb in the possessive voice, a verb derived from the noun of the thing possessed. There are two ways of expressing motion, each within its proper sphere, and they cannot be interchanged. "Motion referred to field," that having an outline defined *only* by reference to field positions, e.g., "go *away*," "go *up*," "go *to* . . . ," "come *from* . . . ," "come *here*," must be denoted nonverbally, with a directional locator, i.e., a postposition or case-form expressing direction like the italicized words, as the predicator. Such a nonverbal sentence means that the subject traverses the

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[8] The features mentioned under Prosodics distinguish the beginnings and ends of *words*, and thus the passage from word to word, which may be called the juncture-type of *contact*, in contradistinction to the passage between bound morphemes within a word, which may be called *ligature*.

[9] Clause, i.e., sentence connected with another.

course indicated by the locator. "Motion referred to figure," that which has a distinctive outline without reference to field positions, like running, wriggling, stirring from rest, turning, falling, etc., must be denoted by a verb, with or without a directional locator also, the locator in this case being nonpredicative.

§3. A major sentence must have a predicate (predicator and supplementary words) but need not have a subject. If no subject is expressed but is required by the meaning of the predicate, third person subject is understood; or such a subject may at option be expressed by a pronoun. But Hopi has very many verbs denoting events that are essentially complete wholes and need not be analyzed into an agent and an activity. Thus, if a flash of light is to be reported, Hopi need not manufacture a subject for it, either pronominal, as "it flashed," or nominal, as "a light flashed"; its word for "flashed" is enough. A "transitory event," meaning a momentary event that leaves no lasting trace or effect, can be named only by a major sentence (or clause) with its predicator a verb or locator. This important principle controls both syntax and derivation. There can be neither original nor derived nouns meaning "a flash," "a spark," "a wave," "a nod," "a blow," etc.; this of course excludes ambivalents too. Nor can such phenomena as shooting stars, lightning, puffs of smoke, etc., be referred to by nouns, ambivalents, or nouns merely modified by other words, as in our "shooting star." The reply to "what is that?" is not "a man running" or "a flying eagle," but "a man runs," "an eagle flies."

§4. Durative events and any events that leave lasting motionless effects can be named by nouns, ambivalents, and adjectives, as well as verbs and locators. True nouns refer mostly to whatever gives the visual appearance of closed or nearly closed and lasting outlines, including not only tangible objects but inaccessible appearances like clouds and heavenly bodies, certain clear-cut configurations of landscape (e.g., hill, mountain, ground), masses of material, body parts, persons however designated (as by their kinship, function, etc.). Nouns of material (water, dust, meat, food, etc.) refer not to figureless continuums as in English but to vaguely bounded bodies or masses. A water mass is called pa·he when large, flowing, or little confined, ke·yi when small and not flowing. Such nouns are not individualized by names of containers etc. since they are already individual; ke·yi stands for "a glass of," "cup of," "drink of," water.

§5. Adjectives never denote visual outlines or shapes. They denote figureless percepts (white, bright, smooth, hot, etc.) or intellectual concepts, e.g., of size, quantity, emotional and social characters and evaluations. Names of durative outlines and shapes (e.g., round, pointed, notched, crushed, broken, a cleft, a dot, a fascicle, a forking, a gash) make up the class of ambivalents. They are not usually employed as subjects but as predicates. The great majority belong to the k-class of the verb system. Various outlines of landscape, e.g., river, gully or "wash," are ambivalents. The most abstract or intellectual words are usually verbs, expressing various kinds of thinking, desiring, mystical experiences, etc., and the language is rich in them; they are also sometimes nouns or adjectives.

§6. Names of cyclic events and time periods,[10] like summer, morning, full moon, are in the class of temporals, a kind of adverbs. They mean e.g., "when it is summer" and are used to qualify predicates. They are not used as subjects, objects, or at all like nouns.

§7. Place names, while formally nouns, are hardly ever used in the nominative case. They are inflected in locational cases and used adverbially in the predicate. The subject of a sentence would not be such a name, like "Oraibi," but would be the village, people, or something else, "at Oraibi."

§8. Positional (not directional) locators are differentiated in terms of a distinction that elsewhere throughout the language is widespread and fundamental. It is herein called the category of "locus." It is based on the contrast of two notions: "*punctual*" i.e., located at or concentrated around a point, a single small spot (with ambivalents the inception-event; with verbs an inception-event and/or a transitory event are located at a "point-moment"); versus "*tensive*," located either continuously or interruptedly over an extent (in one to three dimensions of space for nouns or in two to four of "space-time" for verbs). The contrast is that between one unitary figure or outline and an extended figuration or a group-figure, like a line, course, progression, plurality, distribution, etc.[11] Numbers, aspects, cases, locators, and vocabulary all must fall in line with this distinction in sentences. Thus if a singular subject is made plural all morphemes, including lexemes, in the predicate that are definitely punctual must be replaced by tensive ones of the proper type. Dual number is punctual.

§9. Many words have an elongated form called the pausal form when they end free sentences (not nonfinal clauses). The full pausal ends in a glottally reduplicated vowel ·CV?V, while the sentence-medial form abbreviates this to either ·CV or ·C. On a nonimperative predicator the full form is elided to ·C?V,[12] on a nonpredicating final, to ·CV?. The full form makes the sentence imperative. Words that have no pausal (e.g., most verb forms) glottally reduplicate final vowel for imperative. The final vowel of a sentence, ·V, becomes ·V̂y to give an exclamative form, or when followed by the quotative word yàw to indicate the end of a direct quotation.

6. THE PRONOMINAL AND CASE SYSTEM

§1. Hopi has two great inflectional systems, the verb system and the pronominal and case system. Certain portions of these systems are applied to other parts of speech than those to which they typically pertain, verbs and pronouns. The noun inflection is a reduced version of the pronominal system plus a system of

[10] Excepting year (noun), day or light, and might (ambivalents), while day and night for measuring time, "nth day," always with an ordinal, is a tensor, q.v. below.

[11] In verbs that have no reference to outline, like "sleep," the contrast is simply between singular-momentaneous and plural or durative.

[12] Sometimes reduced to ·CV, especially when the medial is ·C.

THE PRONOMINAL AND CASE SYSTEM*

Pronoun	Cases of Noun Type			Cases of Locator Type				Base
	Nominative	Objective	Possessive	Locative (at, in)	Allative (to)	Illative (into)	Ablative (from, in)	
'I' med. paus.	neʔ ne·ʔe	ney ne·ye	ʔi·	ʔine·"pɛ ʔine·"peʔ ʔine·vʔɛ	ʔinɛ'mi ʔinɛ'miʔ ʔinɛ'miʔì	ʔinɛ'miq ʔinɛ'mìqa ʔinɛ'miqʔa	ʔinɛ'ŋaq ʔinɛ'ŋaqö	ʔinɛ'·'
'we'	ʔitam ʔi'tamè ʔi'tamʔè	ʔita'mey ʔita'meyè	ʔita'·'	ʔita'mèˁpɛ etc. as above	ʔita'mɛ̧mi etc. as above	ʔita'mɛ̧miq etc. as above	ʔita'mɛ̧naq	ʔita'mɛ̧·'
'thou'	ʔem ʔemiʔ ʔemʔi	ʔeŋ ʔe·ŋe	ʔe'·'	ʔeˁpɛ ʔe'peʔ ʔevʔɛ	ʔemi ʔemiʔ ʔe'miʔi	ʔemiq ʔe'mìqa ʔe'miqʔà	ʔeŋaq ʔe'ŋaqö	ʔe'·'
'ye'	ʔema ʔemaʔ ʔe'maʔà	ʔemey ʔe'meyè	ʔeme'·'	ʔeme'"pɛ etc.	ʔeme'mi etc.	ʔeme'miq etc.	ʔeme'ŋaq etc.	ʔeme'·'
'he, it'	— —	— —	— —	ʔɛv ʔɛpɛ̧ʔ ʔɛ̧vʔɛ	ʔaw ʔawiʔ ʔawʔi	ʔak ʔakʷaʔ ʔak̫ʷʔa	ʔaŋaq, ʔaŋk ʔa'ŋaqö, ʔaŋqö	ʔa'·'
'they'	—	—	—	ʔame'"pɛ etc.	ʔamɛ̧'mi etc.	ʔamɛ̧'miq etc.	ʔame'mɛ̧ŋaq etc.	ʔamɛ̧'·'

'that, he, there'	pąm pąmiʔ pąmʔi	pet pęta petʔa	—	pev pępęʔ pęvʔę	paŋso paŋsoʔ pa'ŋsoʔð	paŋsok pa'ŋsôqa pa'ŋsokʔà	paŋaq, paŋk etc.	pa'ˋ
'those, they'	pema pemaʔ pe'maʔà	pemey pe'meyè	—	—	—	—	—	—
'this, he here'	ʔiʔ ʔįʔi	ʔit ʔita ʔitʔa	—	yęv yępęʔ yęvʔę	pew pewiʔ pewʔi	yekiq, yek ye'kiqa ye'kiqʔà	yaŋaq, yaŋk etc.	ya'ˋ
'these'	ʔima ʔimaʔ ʔi'maʔà	ʔimey ʔi'meyè	—	—	—	—	—	—
'yonder, place'	—	—	—	ʔayà'm ʔayà'moʔ ʔayà'mʔo	ʔayǫ'ʔ ʔayǫ'ʔo	ʔayà'k ʔayà'kʷaʔ ʔayà'kʷʔa	ʔaya'q ʔaya'ŋqö	ʔaya'ˋ
reflexive and reciprocal	—	na'ˋ	—	na·v	na·mi na·miʔ na·'miʔi	na·miq etc.	na·ŋk etc.	na·'ˋ

* Medial forms followed by first, or simple pausal, and second, or predicative pausal.

its own, and the class of locators also represents the pronominal system. This pro-
nominal system consists of a set of pronominal bases defining person, number
(singular, plural), and demonstrative relations, and a vocabulary of suffixes defining
cases relations. A word can have only one such base but may have two such suf-
fixes. Among the more frequent forms are some quite irregular in form but regular
in meaning according to their place in the system. The first and second persons
also have prefix forms acting as possessive cases when prefixed to nouns and modi-
fiers of nouns. The table herewith shows some very common bases and cases and
illustrates the whole system.

§2. Some important case suffixes not shown in the main table are as follows:

-ŋ(aʔa) locative tensive	-h(oʔo) partitive
-va(aʔa)[13] adessive (on)	-n(iʔi) simulative (like)
-cvi(ʔo) superessive punctual	-mem(aʔa) sociative (with, and)
-cva(ʔa) superessive tensive	-ŋam(iʔi)[14] ethical (for)
-vníʿqaY,[14] -ʿpeníʿqaY comparative (more than)	

§3. All the suffixes cited thus far are word-final. There are also suffixes that
must be followed by such a final suffix, e.g.: -son- "within" (three-dimensionally),
-ʿpa- "within" (boundaries or walls). These yield compound cases like -sonve
"within," -sonmi "toward being within," -sonmiq "into within."

§4. In the limits of this survey it is possible to indicate the meaning of these
case relations only in a very general way. They are actually used in terms of a
sort of unconscious ideology of space and movement that is typically Hopi. Thus
the illative does not always mean "into" in our sense, but is used for "to" instead
of the allative whenever the goal of motion is out of sight.[15] It also denotes the
instrumental relation, as though something of the action or actor went into the
the instrument. A personal agent however is denoted by the superessive, as if he
were figuratively underneath the phenomenon. Location within a small well-en-
closed interior ("encapsulation") is referred to not by -son- but by the ablative,
as if even reference to such an object partially extracted it from its hiding. The
predicative allative pewʔi is the ordinary "come" or "come here," but "from there"
is another way of saying "come," especially to add the sense of "coming" to a
formal verb, the ablative being used for short linear paths, the partitive for move-
ments that are longer, more massive, or of vaguer outline. Nominative is the case
of the subject, noun-object of an imperative transitive verb,[16] vocative, and noun-
modifier. Objective is the case of the direct object of transitive verbs (except in
imperative as stated) and postpositions, the subject in certain constructions with
the transrelative mode, and the possessor except for the first and second persons,

[13] And -ʿpa(ʔa).

[14] After -a- > -ŋam(iʔi), -evníʿqaY.

[15] Students may be interested in comparing the various uses of the allative and illative in Finn-
ish.

[16] Finnish also makes a distinction in the case forms of noun objects in many cases, depending
on whether or not the verb is imperative.

and even for these as predicative possessive: ne·y(ʔ)e "it is mine." Predicative objective of nouns with animate subject expresses the subject's goal: "I food (objective, predicative)" means "I'm after food." Indirect object is allative.

§5. The distinction between the ʔa·ˑ and pa·ˑ bases in locational sense is that between English unstressed and stressed "there," or between "the place" and "*that* place": paṃ ʔawʔi "he *went* there," paṃ páŋsoʔò "he went *there*." Besides the bases that are declinable throughout this whole system, there are certain peculiar defective pronouns, e.g., haṇ (nom. only) "I" or "I'll," in which it would seem that one's own *unspoken* intention is given a pronoun like a person and contrasted with neʔ the ego, as only neʔ speaks or reports, while haṇ is said to be used in one's thoughts as subject of an intention, or spoken in a direct quotation of another's supposed thoughts. For interrogatives and indefinites, see IX §3.

7. THE NOUN SYSTEM

§1. Selective classes. Nouns are divided among three covert selective classes herein called genders; animate, inanimate, and vegetative (plants); distinguished in the inflections of certain plural forms.[17] The words star, cloud, mist, and wind

TABLE OF INANIMATE NOUN INFLECTION

pa·sa "field" (pausal endings in parenthesis)

	SINGULAR		MULTIPLE	
	Nom.	Obj.	Nom.	Obj.
Absolute	pa·sa	pá·sat(à)	pá·vàsa	pá·vàsat(a)
Construct my field	ʔivása	ʔivásay(eʔe)	ʔivá·vàsa	ʔivá·vàsay(eʔe)
thy "	ʔéˇpàsa	ʔéˇpàsay(eʔe)	ʔéˇpà·vasa	ʔéˇpà·vasay(eʔe)
his "	pá·saʔàt(a)	pá·sayàt(a)		
their "	pá·saʔàm(a)	pá·sayàmey(eʔe)		
his or their " reaffirmative,			pá·samàt(a)	pá·samèyatey(eʔe)
his or their "		pá·sày(eʔe)		pá·vasày(eʔe)
our "	ʔitáˇpàsa ⎫	Inflected like "thy field." Note that the first and		
your "	ʔeméˇpàsa ⎭	second person constructs contain the possessive prefix forms of the personal pronouns.		
modifier stem	pas			
base for suffixes	pásˑ	pa·sa is a "contract" noun		

Note the lenition (IV §6) of primary initial p when it is secondarily noninitial, except when secondarily preaspirated (IV §5, footnote 7) by those possessive prefixes which have preaspirating effect, as symbolized by ˑ in the pronominal table.

[17] This applies strictly only to the Toreva dialect. In Oraibi, for example, these gender distinctions are lacking, and the number inflection is somewhat different.

are animate, but not natural phenomena in general. Kinship terms form another type of covert class that includes at least two nonkinship words. Nouns are also selectivity divided into stress-shift (to last-syllable stress), contract, and nonalter ing nouns according to the process that makes them modifiers and bases for random bound morphemes. Finally there are classes of nouns in -he, -w(e?e), -ŋ(ᵂe?e), the last two nearly all animates, that lose these endings in various inflected forms. These four types of classification all intercross.

§2. Inflections. Nouns are inflected for case (nominative, objective), state (ab-solute, construct), and number (singular, dual, and two plurals: paucal and multi-ple). The construct state is inflected for person and singular-plural number of the construct, i.e., term in the relation expressed by English "of," usually possessor. If this construct is also expressed by a detached word the latter is in objective case, a usage which will be called the genitive objective. The table gives the inflection of an inanimate noun, abbreviated to showing only the singular and multiple numbers. The multiple in all nouns has initial reduplication except in the "his or their" form, which is in fact the paucal, as the distinction of the two plurals is lost at this point. The paucal (meaning "some, a few") suffixes -t(e?e) or for some nouns -te(?e), -ht(e?e), -m(e?e), nom., and -tey(e?e), -htey(e?e), -mey(e?e) obj. in the absolute and first, second, persons construct; third construct is like multiple without reduplication. Animates in multiple are paucals with the addition of re-duplication, i.e., they have paucal suffixes in all the forms, and also most of them contract the reduplicated stem; cf. ma·na "girl," mult. mamaNt(e?e) with pa·sa, pá·vasà. Some animates use the paucal for all plurals, e.g., cịroht "birds," ḳawáyom "horses." Duals[18] suffix -vịt(e?e) nom. -vịtey(e?e) obj. in absolute, first person, sec-ond person but have no third person, using the paucal instead. The vegetative gender has one general plural which suffixes -qölö, -qlö to the modifier base without reduplication and inflects like singular, while söhǫvi "cottonwood, tree," and -cǫki, -cki "-tree, -bush" can also pluralize like inanimates. Noun singulars can be used as plurals when the meaning is clear, but the strong Hopi feeling for spatial configura-tions militates against this. The Hopi category of plural applies to things and events that conceivably could appear assembled simultaneously. The count of repetitions that could not be assembled is not plurality in this view; hence tem-porals and terms like year, day, are not pluralized, and lengths of time are measured by stating the *ordinal* number of the last unit. The declension of the classes whose stems drop characteristic endings in certain forms will be omitted.

§3. The reaffirmative is a special objective third person referring to the sub-ject, e.g., pa·say tẹwa "he saw his (own) field," cf. pá·sayàt tẹwa "he saw his (another's) field." The genitive objective is seen in e.g., ta·qat pá·sa?àt "the man's field" (man-obj. his field). Nouns in general have only two cases, but a number of nouns, e.g., ki·he "house," in their singular absolute can take pronominal case-suffixes on the modifier stem. Demonstratives agree in case with the final case-

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[18] Dual number is lacking in Oraibi and perhaps other dialects.

suffix of nouns; e.g., pám ki·he "that house" is declined: obj. pęt ki·het, all. paŋso ki·mi, ill. paŋsok ki·miq, paŋsok kí·sonmįq "into-within that house," etc. Place names can take all the locational suffixes, and when without them, which is rarely, they usually take the special suffix ·vi, ·pi, which is replaceable by the locational suffixes. Aside from these special forms, the typical pronominal cases are applied to nouns not directly but through the intermediary of postpositions following the objective. These postpositions (IX §4) are the cases of the pronominal bases, usu-ally the ʔa·ʼ base; e.g., ma·nat ʔaw "to the girl," ʔe·kiy ʔɛv "at your house," kí·kihèt ʔaŋ "at (tensive) the houses."

§4. When a noun is preceded by a modifier or modifiers, whether adjectives or nouns, the possessive prefixes are applied to the first such word, the suffixes and reduplication to the noun modified, i.e., the last word.

§5. The kinship-class nouns occur only in construct state. They can however imply an indefinite possessor, for which purpose the "their" form is used: yę ʔam (stem yę·) "their mother" = "one's mother, a mother."[19]

8. THE VERB SYSTEM

§1. Conjugations. The verb system is applied in its entirety to verbs and ambivalents, which are primarily verbs; and most of it, with certain gaps, may be applied to any word used as predicator, but in a way that makes the conjugation of nonverbs different from any of the conjugational classes of verbs. There are four such classes. Simplex verbs do not change their form of stem as between the simplex and the word extended by suffixes; stress verbs shift stress from first to second syllable and preaspirate certain suffixes, contract verbs contract the stem, k-class verbs use a stem extended by ·k· for most forms, though they have certain forms that use simplex and contract stems. The conjugation of nonverb predicators is a fifth class, annex verbations, the suffixes being added to a postposed "annex," similar to a suffix, but even more like an auxiliary verb in close-phrase contact with the predicator.[20]

§2. Resolutions. Verbs fall into two classes of *resolution:* intransitive and transitive. Roots fall into these classes selectively; and the resolution will also depend on the voice suffix, if any, all voices being intransitive and intransitivizing except the causative, which is transitive and transitivizing, and the possessive, which is the same as its base. There are also two intransitive forms made from transitives by preposed elements: the reflexive by prefix ná·, and the incorporative by preposing the modifier stem of a noun, e.g., tav nìna "kills a rabbitt," ciró ninà

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[19] Cf. English "they say." The stem yę· "mother" is irregular in first and second persons: ʔíŋe(ʔè) "my mother," ʔéŋe(ʔè) "your mother."

[20] That the juncture is contact, not ligature (footnote 8), although the group is stressed like one word, is shown by the fact that there is close transition between adjacent consonants, and that the intersyllabic cluster CC-C occurs in forms found only between words, e.g., in ʔáŋk-nini "he will come from there," the first ·ni· being the annex, the second the suffix translated "will." This peculiar form of contact will be indicated by a hyphen.

"kills a bird," formed on the identical pattern of adjectival modifying (IX §1) from the modifier stems tav, ciró of the nouns ta·vo, ciro. These "incorporated objects," which formally are modifiers, not objects, are much less common than true noun objects. Transitives imply a definite third person object if none is expressed; indefinite object must be explicitly indicated by words like "something."

§3. Inflection and categories. Inflection is primarily by suffixes, but reduplication along with suffixes is common, initial for all verbs, root-final for k-class verbs; there is also the prefix ná·, and the intensive prefix sę́· indicating force, speed,

TABLE OF VERB SUFFIXES AND ANNEXES

Word Suffixes	Theme Suffixes	Stem Suffixes			Position 2	Position 3
		Position 1 (nearest root)				
-ta₁	⌐ɪ)n·	⌐ɪ	⌐ɪ)na	-la	⌐ɪ)va	⌐ɪ)nęma°
-làwe°	-ke°	⌐ɪ)L-ti	-vìwa	-yke	-ta₁ ⌐ɪ)ma	
-ʔiw-ta₂ʳ	-me°	⌐ɪ)w-ta₂ʳ	-vɛ-L-ti	-tòyna	-ti -to	
-ʔy-ta₂ʳ	-vte	⌐ɪ̀wa	⌐ɪ)ʔy-ta₂ʳ			

Stem Suffixes, continued

Position 4	Position 5	Position 6	Position 7			
-làwe°	-ya	-ni	⌐ɛʔ(ɛ)	-qaY(-qà̀ʔɛ)	-kaŋ(o)	-kàkaŋ(o)
		-ŋʷe	-t(a)	-qa	-q(õʔõ)	
			-pe	-ve	-pi	

Annexes

Singular Subject	Plural Subject	Long-durative
-nɪ̀· (-ní·ʹ, -ní··)	-ya, -ya·	-màn-ta₁ʳ

Some suffixes have special plural forms, viz.: -ta₁: -tòta, -ta₂: -yęŋʷa°, -ti: -totì, -làwe°: -ilàlwa, -ɪ)ma: -ɪ)wìsa°, -to: -wìsa°.

Special symbols: -ta₁ and -ta₂ are suffixes that pluralize differently; -ɪ, -ɪ̀wa, the first vowel of the written suffixal form replaces the last vowel of the base (written form is a symbolic device for indicating morphophonemic change, usually iotization, of the last vowel plus addition of a suffix); -ɪ)na, there is a replacing-vowel i in some paradigms and in others there is merely the suffix -na; -làwe°, the suffix is contracted before others; -ʔiw-taʳ, the final suffix is replaceable by stem suffixes of positions two, three, four; -kaŋ(o), pausal ending in parenthesis. The first two word suffixes are also listed among stem suffixes to show their positions in combinations of suffixes; the other two word suffixes are position one.

and promptness. The suffixes of the verb system are of three kinds. Word suffixes are added to verbs and also to the modifier stems of nouns and adjectives, which they convert to derived verbs, and are not added to annexes (with certain peculiar exceptions). Stem suffixes are added only to verbs and annexes. Theme suffixes are added to verbs, but only in certain forms of certain conjugations, e.g., the -k- element found in the k-class. The table shows all but a few irregular suffixes, and the annexes, and the purely formal arrangement in which they add, alter, and combine with each other. But the meanings and uses cannot be classified neatly in terms of this arrangement, nor in terms of the individual suffixes. They are best treated in terms of a system of overt nonselective grammatical categories along with the covert categories of resolution and locus (punctual and tensive). In this system verbs are inflected for voice, aspect, number, assertion, and mode, and affected by detached words (analytics) for status, injunction, and modality. Annex verbations lack the inflection for voice and are limited as to aspects;[21] otherwise they are the same.

§4. Voices. The *simple* voice (zero form) corresponds to the English active. The *eventive* is the distinctive, almost untranslatable voice of the zero form of the k-class and all ambivalents, sporadically formed in the other classes by -i, yielding a k-class verb in -i. The k-class is a rich vocabulary of CVCV roots, which denote manifestation of characteristic visual outlines and figural arrangements,[22] occurring as moving outlines, or as movements that leave more or less lasting representative outlines, or as simple appearances of figure-and-ground. Eventive roots[23] are punctual, e.g. one break occurs, one slit into an edge occurs, one drop englobes and drips off, one bursting scatters particles; unless they are plural roots, e.g. lōhō many units fall at once, nöŋa many units go outside or through to the other side, which are tensive. The temptation to think of these roots as nouns, "a break," "a slit" etc. is misleading from the Hopi standpoint. Not only are they formally distinct parts of speech from Hopi nouns; but a Hopi noun denotes a figure only, these denote a figure surrounded by a more or less hazy local ground or field. A noun

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[21] Because the distinctions conveyed in the morphemes of locators and other nonverb predicators largely take the place of aspects.

[22] In a few cases, characteristic sounds also, and *very rarely* ideas that seem outside the figural outline category. Verbs of noise and sound, so common in some American Indian languages, are remarkably rare in Hopi. The language constantly emphasizes visual facts, and characteristically never uses them metaphorically for invisible entities. The realm of the psyche has its own vocabulary; in Hopi one does not "grasp" an idea! Onomatopoeia is rare. But there is considerable of what appears to be symbolism by sound of types of shape, outline, and outline of movement, e.g., many verbs and ambivalents beginning pe- and having reference to outlines like the letter V and/or the idea of spreading apart, others beginning me- referring to cylindric form and rolling, etc. This is not merely typical of Hopi but of Utaztecan, though indeed it is found in many languages, being common in Maya; it is along the lines of English slip, slide, slink, slur, slither, slime, slush, sleet, slick, slop, slump.

[23] A "root" is an unanalyzable stem of form CVCV, or less often CV.

predicator is copulative; its subject "is" that noun. An eventive predicator is occurrent; it declares an event. Its subject is that part of the ground or field to which something happens or has happened whereby a new or altered configuration manifests, either fugitively or with lasting effect. Or it may have *no* subject (cf. V §3), while a predicative noun has a subject expressed or implied. If the root de-notes a "transitory event," leaving no effect or an effect that rapidly evanesces; if, so to speak, the ground or field returns to its original state after the momentary appearance (a flash, a wave, a nod, a leap, a splash, a flutter, etc.), then the root is a pure verb. If it denotes an event with a stable effect on the field, the root is auto-matically an ambivalent and may take noun inflections and uses. Thus one can say "his cut," "into a break" etc. but not "his nod" or "into a wave." The *dynamic eventive*, -ⁱi)L-ti, basically means an event occurring with *added force*, often from outside the subject, e.g., pǫʔo "leans," póʔǫLti "leans his weight, is thrown into a lean, etc." It seems to us a passive because it passivizes transitives, e.g., ʔeʼta "shuts it," ʔéʼcịLti "is shut, caused to shut," but is basically (and paradoxically) an active, the most active of the intransitive voices, often denoting a subject mov-ing energetically of his own accord. The *extended dynamic* voice, -ⁱìwa, is similar but with the "added force" always an external-field tensive influence—"is being ...ed" or "is be...ed" (like e.g., "is bedevilled," "is beclouded") including cases where several agents combine to produce the influence. The *cessative*, -vìwa or -vɛ̀L-ti according to paradigm, shows the cessation of such an influence—"stops being ...ed," treating the change in condition as a punctual event. The *essive*, -ⁱìw-ta₂ʳ, -ʔìw-ta₂ʳ, shows a durative state resulting from or preserving the outline of an event, including the state of uniform motion; the nearest English is our form in a-, e.g., is atilt, astride, aswim, afloat, "a-run" (running): ʔéʼcìwta "is shut (not open)." The *possessive*, -ⁱì)ʔy-ta₂ʳ, applied to nouns means the subject "has" the noun, and may be applied to any number-form—siwáʔyta "has a younger sister," siwámèʔyta "has younger sisters." With noun preceded by modifier it answers to the English e.g., "is long-legged"; one may say e.g., "is pretty-sistered." Applied to transitive stems it means "has it...ed" e.g., sómìʔyta "has it tied" (soma "ties it").[24] The *causative*, -ta₁ for deriving verbs, -ⁱi)na (or sometimes -la, -tòyna, or -ta₁ replacing -ti) on verbs, makes transitives from intransitive and nonverb bases: pe·he adj. "new" pé·hetà "renews it"; pe·wi (contract verb) "sleeps," pewna "puts him to sleep"; qöhi (k-class) "breaks," qóhịkna "breaks it." Most of our transitives of altering shape or outline are causatives of the k-class eventives.

§5. Aspects. These are formed by the stem suffixes positions two, three, four. Certain aspect suffixes may be superposed giving compound aspects, unlike the the other inflected categories, whose subclasses are mutually exclusive. The *prime* aspect (zero form) is punctual or tensive according to its base, the ingressive is punctual and punctualizing, all others are tensive and tensivizing. The *durative* aspect, -ta₁ "is ...ing" has several varieties marked by stem-alterations, reduplica-

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[24] The possessive has the resolution of its base, i.e., sómìʔyta is transitive like soma.

tion or contraction or both, or the theme-suffix -n-. The most distinct is the *seg-mentative*, found in the k-class only, with root-final reduplication, converting the single figural image of the k-class root into a repeating pattern in space-time. The other aspects are frequently formed like secondary derivatives of the various dura-tives, replacing the -ta by other suffixes (sometimes adding them to -ta) and retain-ing the stem-alterations. Add to this that these aspects may compound together, and that all but the durative and continuative handle ideas that are utterly strange to English or indeed Indo-European, and one can perhaps imagine the prodigal rich-ness and amazing subtlety of this aspectual system. The *ingressive*, -ri)va, denotes the moment of realization or actualization, of passage from latency (or from "causal power," an important Hopi notion) into manifestation. It is most used on a dura-tive base to denote beginning of a durative state; "begins to be . . . ing." But on "verbs denoting latency" it denotes beginning not of the latency but of its fruition. Thus tenátya "hopes," "is hoped for," or better "uses hoping" whose subject is either hoping person or latent thing, gives ingressive tenátyàva "comes true as hoped for," i.e., "realizes hoping." Contrast the effect with an ordinary verb, as in pewva "goes to sleep," i.e., "realizes sleeping." The *progressional*, -ri)ma, im-merses the event in a line of motion. A punctual event (indicated by punctual base) without human agent is shown moving in the natural directional tendency of the phenomenon if it has one: ʔéwįkma "flames up, a flame shoots up" < ʔewi (k-class) "a flame occurs," motion natural to flame being upward. A punctual event with human agent is shown as having occurred during a linear course: somma "has been to tie it." A durative event occurs all along the linear course: sósoMtìma "goes along tying it, them" < sósòMta, dur. of soma; ʔewíwitìma "flames run along" < ʔewíwità "flickering flames occur," segmentative of ʔewi. The *projective*, -to, shows a linear motion or impulse passing into the event: cóʔoktò "launches off into a leap" < coʔo "leaps"; soMto "goes to tie it." The *spatial*, -ri)nèmaᶜ, im-merses the event in motion that tours about in space: sósoMtinèma "goes around ty-ing it, them." The *continuative* is a long or indefinitely continued durative, "keeps . . .ing." Its suffix -làweᶜ always replaces -ta₁ and as a word suffix includes the causa-tive force that -ta₁ has with nonverb bases.

§6. Numbers. Plural subject requires -ya except for fixed-number stems and the suffixes that have plural forms (see table). With annex verbations -ya is the annex for plural subject. Dual subject takes a singular verb, and a plural pronoun (pronouns lack dual) with a singular verb indicates dual. Fixed-number stems are numerous, e.g., pọsi "one falls," löhö "several fall." They include transitives that fix the number of the object, either in the root or as causatives, e.g., pọsna "drops one," löhökna "drops several." *Inner plural* is a form confined to the k-class, with -m- (<-meᶜ) in place of the usual -k-, stress-shift, and in the eventive -ti. It plural-izes the single figure of the root within a small local region: poróMti "group of perforated holes occurs" < poro "a perforated hole occurs"; contrast the segmenta-tive porórotà "extended succession of holes occurs."

§7. Assertions. These resemble tenses but refer to realms of validity rather than of time. The *reportive* (zero form) reports an actual occurred or occurring fact; it corresponds to past and present tense. The *expective*, -ni, declares an expectancy, and corresponds to future or incipiency, e.g., somni "he will, wants to, or is about to tie it," except when by context it refers to a past expectancy, "wanted to, etc." The *nomic*, -ŋʷe, declares a general or customary truth, e.g., ciroht pé·yáwnemyàŋʷe²⁵ "birds fly."

§8. Modes. The *independent* (zero form) is the mode of an independent sentence or of one of two or more linked clauses. The dependent modes link a clause to another clause, either independent or dependent, each mode in a certain "sense." The *transrelative*, -q(ö?ö), links clauses having different subjects; this is not merely an incidental trait but is the "sense" of the mode, patterning with the senses of the other modes. The mode means that a new subject enters, or will enter if the transrelative clause is first. The other modes link clauses with the same subject. The *conditional*, -ʳε?(ε), "when, if," states the condition that justifies a nonreportive (expective or nomic) assertion: mę?ε? ní·náni "when he shoots it he will kill it"; mę?ε? ní·náŋʷe "when he shoots it he kills it." The dependent clause is in the same assertion as the other clause, as this suffix fuses mode and assertion in one indicator. The *correlative*, -qaY (-qà?ε), "since, as, etc." denotes causal connection and "accessory to the fact": mę?à·qaY ni·na "having shot it (or, by shooting it) he killed it." On the expective it denotes purpose: mę?anįqaY "in order to shoot it." With special adverbs (tensors or locators) it denotes "until," "as if," "where," and other accessory relations. The *concursive*, -kaŋ(o), -kàkaŋ(o), "as, while," denotes contemporaneous occurrence: mę?akàŋ pǫsi "as he shot it he fell off." Concursive expectancy means priority: mę?anikaŋ "before shooting it," i.e., "while about to shoot it." The *sequential*, -t(a), "after, and," denotes sequence without implying causal connection: mę?at co?o "after he shot it he leaped." The *agentive* -qa, forms relative clauses and is inflected as a noun: mę?à·qa "he who shot it"; ne? ní·náqat ?aw?i "I went to him who killed it." It denotes functionary or office on the durative (-tàqa), habitual actor on the nomic (-ŋʷęqa). The transrelative is used, when there are different subjects, in all these senses, which are secondary to its own sense and distinguished when necessary by adverbs and word order. It is used for indirect discourse and for relative clauses of our type "whom . . . ," also "to whom, from which, etc." with case forms of demonstrative pronouns (Hopi has no relative pronouns). Allied to the modes as position seven suffixes are the verb-derived nouns; of thing effected ("*nomen patientis*") in -pe, -ve, and of place and instrument in -pi.

§9. Status. Affirmative, zero form, *negative* in reportive and nomic by qà

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²⁵ This verb is in spatial aspect because the prime aspect is punctual, pé·yála "floats once outspread winglike in air," and of the tensive aspects the spatial best expresses general flying. The verb belongs to a subtype of the simplex class, not treated in this paper, ending in an element -la which changes before certain suffixes.

"not," in expective by soꞎon "not." *Interrogative*, by sentence-introducing pè[26] or merely a special restressing of the beginning of the sentence like the pè sentence, interrogative adverbs (indefinitives, IX §3), and interjections or phrases equivalent to "*n'est-ce pas?*" The interjections for replying are ꞎowíꞏy[27] "yes," qaꞎɛ or qaꞎéꞏy "no," píꞏhíꞏy "I don't know."

§10. Injunctions. *Imperative* is a pausal inflection of the entire sentence, as explained in V §9. The k-class verb adds its theme suffix to the simplex: wárikeꞎè "run!"; contrast wari "he ran." Transitives can make an imperative by simply expressing the nominative object immediately after the verb: męꞎa cĭro "shoot the bird." *Vetative* is the expective with qà instead of soꞎon and the usual objective-case object: ꞏ qà męꞎàni "don't shoot the bird." *Optative* is expective with the adverꞏ . or tęm which implies "we" subject: tęm wárĭkni "let's run" (dual).

§11. Modalities. These are a system of nuances that express the type of in-tellectual validity of a statement. Thus the reportive assertion denotes the occur-rence of a fact, and in the *indicative* (zero form) this is so without reservation. But in the *quotative* modality, sign yàw, the statement is one of hearsay. The modalities are denoted by a group of detached words belonging to the class of modalizers. There are many modalizers expressing meanings of this sort, but in only seven are these meanings regarded as grammatical categories (modalities). They are so re-garded because of their systematic character—being mutually exclusive for the most part, and coordinated with the modes as part of the apparatus of dependent clauses, though also used in independent sentences. The *concessive*, kęr, makes the statement a valid assumption, either by evidence or inference, or without evidence but as a postulate for the sake of discussion, hence with conditional or transrela-tive mode it stands for "if," though having many other uses. The *indeterminate*, sen "may," i.e., "may or may not" denotes balanced positive and negative possibili-t es. The *suggestive*, kɛ "may after all," "may still," "may really," stresses slightly a positive possibility; with negative it gives "may not." The *inhibitive*, kerhín, is "cannot"; its negative kerhín qà is the *potential*, "can." The *necessitative*, "must," is the double negative soꞎon qà.[28] The *impotential*, ꞎas, is connected with the Hopi notion that I have referred to as "causal power," either in an event already oc-curred, or in any tendency or effort toward later events. It indicates insufficient "power" for further actualization of the end or principle of the action or state. Hence in the reportive or nomic it means that the action or state is in vain, and to be met with frustration or reversal: ꞎas waꞏya "he vainly ran away (but was later caught)," and, if the clause in parenthesis is added, no word for "but" is used, ꞎas in the other clause being its equivalent. It may denote instability of state, as in

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[26] Or yà in Oraibi. This pè is not to be confused with the tensor pęꞎ, pęꞎ.

[27] In rapid tempo often wɛ. A curious likeness to French!

[28] The above translations correspond to the modalities with the expective assertion. They are equally usable with the reportive and nomic, answering then to "perhaps," "could," "had to."

"it *was* here but got taken away."[29] In expective it denotes trying without im-
mediate success: ʔa̧s wá·yáni "he tries (or tried) to run away." With conditional
or transrelative mode it makes a "contrary to fact" conditional clause.[30]

§12. Pronominal Verbs. The pronominal simulative case forms pa̧n "like
that," ya̧n "like this," hi̧n "like what?" yield derived verbs e.g., pa̧nta "be or
seem like that," pa̧Nti "act like that" and verbs with certain other aspect suffixes
like pa̧nma "go along like that"; also are prefixed to certain stems not occurring
free, viz. ⸗qàwe "say" (pá̧Nqàwe "say so"), ⸗càki "do," ⸗càna "do to it." These
pronominal verbs are much and idiomatically used. "What are you doing?" is
ʔem hi̧ncàki.

9. THE ANALYTIC CLASSES

§1. Adjectives. Adjectives are selectively divided into simplex, stress, and
contract adjectives, according to the form of stem used as modifier before nouns as
contrasted with the primary form used as predicator, e.g.: pe·he (simplex type)
"is new," pe·he vo̧yo "a new knife" (po̧yo "knife"); qŏca (stress) "is white,"
qŏcá voyò "a white knife"; ca·va (contract) "is short," cav voyò "a short knife."
These changes are the only inflections of adjectives, and together with the stress
patterning of the entire phrase and the lenition of following p⸗ to v⸗ form an *ad-
jectival system*, applicable also to nouns and ambivalents as modifiers, or as first
elements of compounds. A noun, according as it is simplex type, stress, or contract,
will behave exactly as an adjective of similar type,[31] while k⸗class ambivalents are
of the stress type as modifiers.

§2. Numeratives. These include the numerals and terms like all, many. Some
e.g., the first four numerals, have irregular inflections of plural and objective case,
others are indeclinable. The Toreva dialect has simple numerals up through ten,
and one for twenty, the others being phrase-like composites following the decimal
system. Oraibi has the odd feature of simple numerals up through twenty. All
numerals inflect to give a pausal form, a combining form, and two forms of ordinals,
which are also multiplicatives, or rather the Hopi pattern of ordinal numeration
takes the place of multiplicatives. As explained under nouns, units that cannot be
congregated in space, like days, repetitions, "times," or other successive units of
the same cycle, are counted by ordinals. "Ten days" is not, as with us, treated as
an imaginary aggregate, but as the relation between two events, one on the tenth

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[29] In Hopi, ʔa̧s yȩv·nit kȩr hoyo—sequential mode (⸗t) of annex (⸗ni⸗) verbation of yȩv "here,"
kȩr concessive modality because the taking away is an inference, hoyo, k⸗class, eventive voice, "gets
moved out of previous position."

[30] For a more detailed explanation of the modalities, modes, and assertions, see Whorf, *Some
Verbal Categories of Hopi* (Language, 14, vol., pp. 275–286, 1938).

[31] The noun classes with special suffixes introduce a few minor variations. Sometimes these
suffixes are lost and sometimes not. It may be well to repeat here what was said in V, that while
nouns and adjectives as *modifiers* are entirely similar, adjectives form a distinct class because they
cannot be used completely like nouns, i.e., as independent substantives.

day after the other.[32] Syntactically, cardinals are treated like defective nouns, and ordinals like adverbs.

§3. Indefinitives. It is convenient to treat the interrogative-indefinite "pro-nouns" as a distinct part of speech, as their inflections, though akin to those of the pronominal system, are irregular and defective. They are formed on the bases: hi-inanimate or impersonal, haki human beings, and fairly regularly with locational suffixes on haqa- for place. They are indefinite (e.g., "something") as well as inter-rogative ("what?"), the distinction being one of context.

§4. Locators. These are the case-forms (other than objective) of third-person pronominal bases, and of some other bases, already described in VI and VII §3. Many are postpositions, but some are simply adverbs, e.g., ʔáʻpiy(oʔo) "away" or "go away." Many have for bases nonpronominal lexemes not occurring free. Of this type are the important seven orientation terms, i.e., the four compass-points, up, down, and "all directions." Their case-forms are irregular; the allative is the usual name-form of the direction, and in several cases lacks the suffix -mi.

§5. Tensors. As locators correspond to our adverbs of place, so tensors do to adverbs of time and degree. They are sharply distinguished from locators by lacking case suffixes or case distinctions; they never e.g., express time by a locative "in, at," or any other spatial reference. To our notions they seem to be either de-gree terms, with degree mixed up with manner, or time terms, but it seems prob-able that in principle they all denote *intensities* of various types.[33] Not only the degree but the kind of intensity is expressed, as to whether it is gentle or rough, punctual or tensive, constant, increasing, decreasing, etc. Incipient intensities are the same as tendencies, and are rendered e.g., "very quickly, right away, now," or "quickly, soon after, soon" etc.; they may be said to be estimators of present or future time. Punctual intensities contain a demonstrative sense and so place an event at a point in the reportive realm, i.e., the past, at more or less remoteness from the speaker, e.g., at *this* event or moment, at *that* event or moment, at that

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[32] There is a minor exception to this in stating a person's age in years, where Hopi, like French, says he "has" so many years, and cardinals may be used to modify the possessive voice verb derived from "year." Here ordinals are also correct, and for ages in days, using a similar construction, they seem to be required.

[33] This is borne out by lexical study. Hopi does not express intensity, tendency, or duration metaphorically with space and size terms (like much, more, grow, long, etc.)— but has abundant lexi-cal as well as inflectional means for expressing them directly. Tensors show little sign of derivation from space or size terms. Besides tensors, there are certain verbs that express intensity, tendency, and duration directly (e.g., pevęLti "abate in intensity"), again without hint of derivation from spatial terms. Ideas of constant or varying intensities are being continually encountered in this body of lexical material. We have here a large array of lexemes in which denoting of intensities seems to be the leading principle; and tendency, duration, and relative time position seem to be fused with intensity, as with us they are fused with spatial magnitudes—extension, size, and motion. Hence the term "tensor" seems appropriate for these elements that express the intensity-factors of the sentence's ideas.

remote (long past) event, etc. The tensors pę⁷, pay(e⁷e), pasat all may be translated "now" or "then," but pę⁷ corresponds to "this," pay to "it," pasat to "that"; pay also implies "this becoming that," and as predicator means "become past" or "go" in the sense of "depart, quit the scene": ne⁷ páy-ṇini "I'll go" or "now I'll go." Hisat is interrogative "when?" or indefinite "at some time (ago)." Others have repetitive and long durative meaning like "again," "often," "constantly," "all day," "more and more." In general the tensors handle notions allied to those of the verb aspects.

§6. Temporals. These denote points and periods in natural cycles, like summer and the other seasons, morning and other times of day, the moon's phases, the Hopi months, etc. They are wholly adverbial, as more fully explained in V §6. Nevertheless the season terms have an inflection that resembles a nominal objective case, which is in rare use with certain postpositions. Some temporals are transrelative modes of verbs, e.g., "sunset" is the phrase "when the sun enters" (transrelative).

§7. Modalizers. These are the words that denote the modalities, and a good many others of the same type (see VIII §11). ⁷era, meaning according to memory, and nawes "must" in the sense of "can't very well refuse" are further examples of modalizers.

§8. Particles. The words that denote status and injunction, and miscellaneous nuancing words and sentence-introducers.

§9. Conjunctions. There are but three: the correlative conjunction nïˀqaY, the concursive ni·kaŋ and the transrelative niq. They consist of the annex ni- with mode suffixes, used as an independent word. They introduce sentences or clauses as though one of these modes had preceded, whether the preceding sentence or clause be in the independent mode or in the same mode that is reaffirmed by the conjunction. They are all rendered "and."

§10. Interjections. These do not differ from interjections in any language. Included here are the reply words, greetings, and clichés of politeness.

§11. Men's and women's speech. The speech of the two sexes differs in a few minor points of vocabulary, largely or entirely confined to the analytics. Thus the sexes use different words for "pretty" (adj.), "greatly" (tensor), and "thank you" (interjection).

§12. Sentence introduction. Sentences and clauses are frequently begun with one, two, three, or even more short analytics—conjunctions, tensors, modalizers, particles, and sometimes an interjection.

10. EXAMPLES OF SENTENCE FORMATION

In order to show the language as functioning, with the maximum of condensation, a small number of analyzed and explained sentences has been preferred to a connected text or to numerous examples scattered through the grammatical description.

§1. maˑna ʔayám kiˑvɛ qatéˑqa ʔaŋk wárikìwta. "The girl who lived in yonder house came running": maˑna "girl," unmarried woman" nom. sing.; qatéˑqa nom. sing. agentive of qate (stress-verb) "sing. subj. sits, dwells"; kiˑvɛ punctual locative suffix -vɛ added to modifier-stem kiˑ of kiˑhe "house"; ʔayám punctual locative of demonstrative pronoun "yonder," ʔaŋk ablative pronoun "from it, from there," changing translation of verb from "was running" to "came running"; wárikìwta essive of wari (k-class verb) "sing. subj. runs," the essive indicating continued states, not only states at rest, but some kinds of motion of a constant, uniform type. Reportive assertion is used here to denote that the living and running are simply reported as individual events. To render "the girl who lives . . . came . . . etc." the agentive verb would be nomic, qatéŋʷèqa. Each verb is at the end of its clause, the the normal but not obligatory order. Let us consider now the change produced by pluralizing "girl" and "house."

§2. mamaNt ʔayéʔ kíˑkihèt ʔaŋ yɛsqam ʔah yéˑtekiwyèŋʷa. "The girls who lived in yonder houses came running." Every word in the sentence has been changed. From the Hopi standpoint what has happened is that a number of punctual situations have become tensive. MamaNt "girls," multiple plural of maˑna, being animate has suffix -t and contraction in addition to reduplication; yɛsqam, paucal suffix -m is used on agentives for general plural, here on agentive of yɛˑsɛ (contract verb) "plur. subjs. sit, dwell." "House" now being plural it cannot have case suffixes added directly and a postposition must be used for "in"; this is ʔaŋ tensive locative, for location in more than one place is tensive, and is used with objective case in -t of kíˑkihè multiple (inanimate) "houses"; ʔayéʔ tensive locative of "yonder"; ʔah "from there" now partitive instead of ablative corresponding to a diffused or distributed removal; -yɛŋʷa the plural form of -taₔ, the verb being essive of yeˑte (k-class) "plur. subjs. run." The sentence does not mean that they came running from their houses, as the partitive is not on the "yonder" base.

§3. taˑqa wekónavnày repámnat pay tavíni paˑs ʔetéˑheʔmòqqàʔɛ. "The man unbuttoned his coat and then began to take it off, because he felt so very hot": taˑqa "man" nom. sing.; wekónavnà "coat" a compound of weko adj. (stress-class) "big" and navna "shirt," with reaffirmative objective case suffix -y; repámnat sequential mode (-t) of causative voice (-na) of inner plural theme (-m-) of reˑpa (k-class) "separation, slipping apart occurs," hence "separates or parts at a number of points" i.e., "unbuttons," the reportive assertion indicating a particular event, the sequential that it was followed by action of the same subject indicated by the verb of the next clause, tavíni, expective of tavi (stress verb), transitive, "moves location of singular object," used of one's garment for "takes off." Expective being in context of continued narration refers to moment prior to the event—"was about to" or "began to"; pay, tensor, punctual, but indicating a degree of intensity which manifests not quite immediately but with a slight lag or interval between action and the point of reference, in this case "and then." In the final clause the tensor paˑs, tensive, indicates a continuous, efficient, mild intensity that produces

results gently and gradually, as it were by persistent gentle pressure. Often it is translated "soft," "gentle," "slowly" etc., here merely "very"; but it refers to the cumulative effect of the sun's warmth (the sentence is from a Hopi rendering of the story of the North Wind and the Sun). It must not be confused with pạs, a tensor meaning "very" in a quite different sense. Finally we have correlative mode (pausal form) ꞏqà̓ꞏɛ "because" of compound verb formed from ꞏetę̓heꞏ̓è adj. (contract) "warm, hot" referring by itself to air temperature but when compounded with moꞏki (contract verb) "die," "be wrapped up," "feel dominant sensation," meaning "feel hot."

§4. wíkpàŋʷat sosoMk pạnis repápatà "He was tying the rope but it was slipping": wíkpàŋʷa "rope," ꞏt objective; soma (contract) trans. "ties it" > durative sósòMta (reduplication, contraction, and ꞏta₁) in which form the ꞏta may be omitted if there is a mode suffix as in the present case; transrelative mode ꞏq (morphophonemic change to ꞏk after consonant) meaning that the action (tying) is linked with the action of another subject (rope), viz. repápatà, segmentative of reꞏpa (kꞏclass) "separate, slip," meaning that a succession of little slips occurs (note deaspiration of primary ꞌp as it is moved out of bounds by the stress-shift, as also in repámnat of the previous example); pạnis, tensor, tensive, meaning an intensity that is exerted persistently for a certain time though the outward effects (action) may be either continuous or interrupted. When its clause is linked to another clause without a distinct reference to later sequence, both clauses being tensive, pạnis refers to the same period of duration as the other clause, i.e., "while." Note that the "while" of the concursive mode is ruled out by the requirement of transrelative mode for different subjects, and pạnis takes its place, though pạnis could also be used in a concursive linkage. This "while" idea also sufficiently expresses the English "but" in this case, there being enough adversative contrast between the ideas of tying and slipping to make an adversative expression unnecessary. The sentence, not being impotential, implies that the tying will triumph over the slipping. If the impotential sign ꞏạs were before "tying" we could then read "but it persisted in slipping," for this sign would mean that the tying energy or skill was inadequate to cope with the situation, in this case with the slipping tendency. For "he tied it but it (immediately, pę̀ꞏ) slipped" we would have ꞏạs soMk pę̀ꞏ reꞏpa.

§5. yowyaŋ löqö́ckit mę̓aq neꞏ navǫ́tk ꞏeme "Upon lightning striking the pine-tree I heard it thunder." Here the different Hopi and English adjustments to objective phenomena require wide differences in pattern and in phraseology. The difference is not merely stylistic, being grounded in the grammatical set-up of parts of speech. "Lightning" as an event, being a transitory event (V §3, VIII §4) cannot be a noun or ambivalent. The verb tálwiꞌpi composed of taꞏla (contract ambivalent) "light" and wiꞏpi (kꞏclass verb) "lashes once (like a whiplash)" denotes the occurrence of a lightning flash; the derived ambivalent tálwipìki denotes the outline of lightning as capable of being fixed, and hence a lightning-like design; neither are

applicable here, if we are to refer to the blasting of the tree by making "tree" object of a transitive verb. Although eventives need not have a subject, transitives must, as in English. English patterns with "lightning" as an actor, acting upon the tree, but as we have seen, the Hopi "lightning" is a verb, and cannot be an actor. But yowyaŋ "rainstorm" denotes a long-enduring event, could be and is a noun, and can be a subject; it is here treated as the "real" or objective agent. From the Hopi viewpoint "rainstorm" is the common source or cause of all the varied phenomena experienced at such a time; lightning flashes, thunder, falling drops, blasting of trees, etc. If it is desired to speak only of the effect on the tree, the attendant flash need not be alluded to. The verb is a special use of mę'a "deals it a swift penetrating action, stings, pins, nails, or shoots it." Löqŏcki "pine-tree," compound of löqö (stress-class) "pine" and -cǫki "-tree, -bush" (elision as per IV §3) occurring free as cǫki (k-class ambiv.) "(thing) perched up"; -t objective case. The name of a tree genus used without -coki tends somewhat to imply a piece of the wood. Verb in transrelative mode (-q) denoting dependent linkage with another subject, ne? "I." Verb of next clause is transrelative (-q, morphophonemic change to -k after consonant) of navóta (contract vb.) "sing. subj. hears it." Final verb is 'eme (k-class), eventive, "loud detonation, or 'boom' occurs," applied to thunder, explosions, guns, etc. whence the Toreva word for gun, 'emékpi (-pi noun of place or instrument, VIII §8). In this type of statement, "he hears that . . . ," and in indirect quotations, it is the verb of hearing, saying, etc., that is put in the dependent mode. This pattern might be rendered in the present instance as "by my hearing it thundered."