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THE HOPI LANGUAGE. 1935

THE HOPI LANGUAGE

by

Benjamin Lee Whorf

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Note: This Ms. was found among Whorf family papers by J. B. Carroll.

The Hopi lan  
northeastern Ar  
sketch records  
Mr. Ernest Naqu  
the Uto-Aztecan  
flective type.

I. Phonology

A. Major co  
series m, n, ŋ,  
w, y, h, ʔ (glc

B. Minor co  
series 'p, 't,

homorganic with

Y. This serial  
behavior.

C. Vowels:

D. Secondary  
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E. Seconda  
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THE HOPI LANGUAGE

Benjamin L. Whorf

Oct. 1935

*Corrected  
re-arranged.  
L.W.*

The Hopi language is spoken in several pueblos of the Hopi Indians in northeastern Arizona, in several slightly differentiated dialects. This sketch records the dialect of the pueblo Mishongnovi, as obtained from Mr. Ernest Naquayouma, a Hopi residing in New York City. Hopi belongs to the Uto-Aztecan stock, and is a rich and expressive language of the inflective type.

I. Phonology 1. Classification of Phonemes *fold-face*

A. Major consonants: 1) stop series p, t, q, k, q, k<sup>w</sup>; 2) nasal series m, n, ŋ, ɲ, ɲ<sup>w</sup>; 3) durational series s, l, r; 4) semivowel series w, y, h, ʔ (glottal plosive)

B. Minor consonants: 1) spirantized series y only; 2) pre-aspirated series 'p, 't, 'c, 'k, 'q, 'k<sup>w</sup>; 3) desonantized series (voiceless and homorganic with A 2), l, r, w, y: M, N, N̄, N̄̄ standing for \*k<sup>w</sup>, l, r, w, y. This serial arrangement of consonants is according to consistency of behavior.

C. Vowels: a, ɛ, ɨ (hereinafter written e for convenience), i, o, u.

D. Secondary phonemes of vowel length: long a', medium and/or neutral a, short a. *Recent phonemes*  
*Length phonemes*  
*Attack phonemes*

E. Secondary phonemes of pitch-and-stress accent: 1) primary stress a' 'high stress', â 'falling stress'; 2) secondary stress â 'low stress'. *less clipped*

Each consonant or vowel phoneme represents a constellation of 'allo-  
phones' or sounds, each of relatively fixed timbre depending on and changing with phonetic surroundings in the word; thus y represents [y] and [ɨ] (bracketing denotes 'close' transcription according to standard symbology).

'Relatively fixed timbre' means fixed in features for which the language requires fixity, and admits of random free variation in other respects about the norm, e.g. variation between [v] and [β]. To describe all the minute allophonic sound-differences is unnecessary in a mere sketch; shall content myself with a cursory survey. The symbol b means 'any consonant, u 'any vowel'; the processes b > 'b, b > B are of change to the homorganic pre-aspirate and desonantized; bF 'syllable-final consonant'.

2. Consonants The stops vary at random around the norm 'weakly aspirated, weakly fortis', sometimes approaching intermediates or again in more forcible utterance the English initial surds. t is alveolar. c in cu is an affricate between [c] and [ç], in uoF it is [c] except in cuoF where it is assimilated. k, g are almost but not quite one phoneme; two inter-lacing constellations. They have defective and partly (but only partly) complementary distribution. k occurs: 1) in ka, ke, ki, ky as front k, with y-glide to the lower vowels [k<sup>y</sup>a, k<sup>y</sup>e, k<sup>y</sup>i, k<sup>y</sup>i]; 2) in ke, akF, skF, ekF, ikF, bkF as mid-back k of Eng. cur; 3) in ko, okF, ökF as back k of Eng. code. g occurs: 1) in ga, gö as decidedly velar [g]; 2) in aqF, sqF, iqF, öqF as back k only slightly velar but velarizing the preceding vowel. Except in the shared positions ba, abbF, ebbF, ibbF, öbbF, the guttural stop conforms to its phonetic surroundings, becoming k or g as they may require; in the shared positions original k or g persists through a process that yields these positions. Thus by contraction, paqa > paq; paka > pak; poqa > pok; poka > pok; by contraction plus -e?, paqa > pak-e?; paka > pak-e?; by adding -g, paki'- > paki'-g; yeke' > yeke'k; solM- > solM-k. These phenomena may be considered both phonemic and phonological.

Nasals ŋ and ɲ are homorganic with k, g and have the same type of distribution and interchange except for the possibility of ŋe. ɲ<sup>w</sup> is defec-

tive in being n  
in un<sup>w</sup>?. Orig  
k<sup>w</sup> may have any  
usually like En  
z quality [ɹ<sup>z</sup>],  
quidity of Amer  
ters uw, uy are  
semi-vowel is i  
way as consonan  
[ɣ] respectivel  
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[ma'-taf-ia].  
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minors without  
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tive in being never word-initial, word-final, nor syllable-final except in un<sup>w</sup>?. Original n<sup>w</sup> otherwise brought into the position ubF yields un<sup>w</sup>F. k<sup>w</sup> may have any position. g shows random variation toward [ǰ] but is usually like English g. r is untrilled retroflex r with slight cacuminal-z quality [r<sup>z</sup>], suggesting Czech ř but less rough, with more of the liquidness of American English r. l, w, ɣ, h are as in English. The clusters uw, uy are actualized as diphthongs [au, eu, ai, etc.] even when the semi-vowel is intervocalic (kila'we [kilau'i]), but configurate in every way as consonants. Intervocalic ? after i, o, e is tinged with [ɣ], [w], [ɣ] respectively. Final ? is sharp, and a slight non-phonemic catch heard or imagined after final vowels must not be taken to be ?; it is only a by-effect. Word-final ?u always ends in a by-effect of aspiration [?uh]. Per contra the word ?ah ends in an h stronger than the expected by-effect; it is shown by analysis (cf. the rhyming pah, yah) to be phonemic h. v varies from bilabial to labiodental, when next to o usually bilabial. It is always voiceless in uvF, voiced otherwise; this rule is strict, even in clusters like vy, vy, v?, e.g., po'vvośa'la [pof-vó-sa'la], ma'távya [ma'-taf-ja]. The pre-aspirates are homorganic with the major stops in the same position and are preceded by a soft aspiration (softer than h) and a silencing-out of the preceding vowel. They occur only after a vowel in the same word, and do not occur preceded by an unstressed and followed by a stressed vowel, nor as syllable-final. When moved out of bounds they revert to their majors. The desonantized consonants occur only as syllable-final. Major consonants are not defective in the same way as minors adp may occur in all positions characteristic of their own minors without being obliged to undergo the minorizing change. This minorizing is treated in I7 for 'b, II2 for B.

3. Consonant-clusters word-initially may not occur, medially any two consonants may cluster, word-finally only -bt, -bk, -bk<sup>w</sup>, -wb, -yb. Word-medially three may cluster, given two semivowels (or one in wbb, ybb). Clusters of three result from certain 'contracted elements' (II2); the only common one is y<sup>2</sup>pb, in which ?y is actualized as glottalized y. Medial clusters of stop + n or l, or b + w or y insert between the members a murmur-vowel with the effect of a very short (shwa-length) extra syllable, the semivowels becoming like the u, i of falling diphthongs. This shwa-syllable does not affect the structural syllabification, which, if we may shirk the slight contradiction of the triplet-clusters, requires syllables to be either bu or bub except for the above-cited clusters allowable at the end of a word. Doubled consonants may occur intervocalically; not in word-final, where \*-tt > -t, \*-kk > -k, \*-kq > -q (and -q or -k will then become -k or -q if required by the preceding phoneme), \*-k<sup>w</sup>q > -qk<sup>w</sup>, which may then have to become -kk<sup>w</sup>. Intervocalic \*-kq- > -qq-, but -qk- is not assimilated. True doublets are markedly long and must not be confused with a slight lengthening shown by intervocalic n, by l in ulu, ~~and by~~ and by a stop preceded by homorganic desonantized nasal.

4. Vowels Roughly, a as in father, ɛ between met and mat, e as in serve (without r, as in New England or Southern U. S., i.e., high-back-unrounded), i in machine, o in German Sohn, ö is rounded ɛ, not quite as in German, more as in French fleur. These are the 'bright allophones'; there are also the 'dull allophones', in which the timbres are shifted toward or to [ɒ] of but, [ɛ] of met, [ɪ] (between i and ɪ), [ɪ] of pin, [ʊ] of put, [ü] of Ger. Gründe. Long vowels are always bright, short vowels except i are dull (other exceptions due to velarizing), vowels in ak<sup>f</sup>, sk<sup>f</sup>, ik<sup>f</sup>, ök<sup>f</sup> are dull, non-long i is dull in closed syllables, and there are more special principles of dulling which we shall skip. Velar-

izing of a occur  
Velarizing of no  
the q. Velariz  
[o] of dog, with  
or to [ä] of mat  
vowels.

5. Vowel-len  
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parted from, til  
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dary quasi-short  
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'Scotch snap' in  
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first syllable  
reduplication)  
elided, e.g., n  
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our as word-fin  
comes a semi-sh  
are  
shown in, e.g.,

izing of a occurs before q, its effect being that of keeping a bright. Velarizing of non-long i occurs before q, making it [iɑ] with a-glide to the q. Velarizing of ö occurs in non-long öqF, the vowel becoming almost [ɔ] of dog, with a tinge of ö-timbre. Short q after y is shifted toward or to [ä] of mat. I omit mention of other slight effects of consonants on vowels.

5. Vowel-length Long is markedly long, medium is half-long in high-stressed open syllables, shortening the more that this condition is departed from, till in unstressed syllables where this is the only type it may be nearly or quite as short as the true short. Short is quick and clipped, resists all rhetorical lengthening or drawing, unlike the secondary quasi-short ('neutral') derived from the medium, and being always in stressed and usually open syllables has somewhat the rhythmic effect of a 'Scotch snap' in music, when followed by unstressed. Long and short occur only under stress (the term stress unqualified includes both high and low stress). There are no grammatical processes that can remove all stress from a long vowel. Stress may be removed from a non-long vowel originally first syllable by various stressed preposed elements (prefixes, prenexes, reduplication) and a short vowel relieved of all stress in this way is elided, e.g., na' + tə'ke > \* na'tekə > na'tke. This example also illustrates the reduction of long vowels which usually occurs, though not always, when their syllables are closed. The half-long medium in the same position as the short vowel of this example is reduced to short-like neutral and may optionally be elided. Some words of this origin are now petrified in the elided form. The true 'snappy' short vowel does not occur as word-final, and an original short getting into this position becomes a semi-short neutral with no staccato effect. These length phonemes <sup>are</sup> shown in, e.g., qala 'clinks', qala 'edge', qa'la 'rat', təwa 'sees it',

te·wa 'sand', qöhi 'breaks it', qö·hi 'fire'.

6. Accent High stress consists of dynamic stress plus a tone-register higher than the normal, and marks the main accent of a word or compound phrase. Certain classes of words and phrases may have two high stresses, either adjacent or separated. Most bisyllabic words have high stress on the penult and this is to be understood where no accent is marked. All other cases will have accents marked. Low stress consists of stress in the same low tone-register as the unstressed syllables. It marks the secondary accents that usually occur in words of more than two syllables in positions dependent upon word-structure. Final syllables can have a third type of accent, falling, e.g., ?i·sâw 'coyote', where a stressed vowel falls gradually in tone to low; contrast paki't 'after entering', where the tone falls very little or not at all and low register is not resumed till the next word. Monosyllabic words give the effect of bearing a subdued form of high stress and are so considered (they may show long and short vowels), except for enclitics and proclitics, e.g., qâ 'not', which are in low tone and so marked -- they may give either a low-stressed or an unstressed effect in the sentence rhythm. Three-syllable words show very commonly the types bu'bubu (like English 'cry-baby') and bu'bubu (like butterfly), but are not restricted to these. In still longer words the pattern possibilities become most complicated. Their rationale follows simply enough from the actual word-building processes. Where the rhythm u·bubu occurs and u·b is ö·q (e.g., qö·qamät 'their elder sisters') the long vowel has a tgw-pulse effect with rhythm nu'bubu [qöö'qamät]. Elsewhere such an effect occurs only in the word po'si 'eye', pronounced poq'si.

7. Sandhi in Hopi is chiefly spirantization of initial p to v by a preceding element in close nexus (II4). Any preceding element has this effect, whether ending in vowel or consonant; except certain words and elements called 'pre-aspirating' (this quality is denoted by superscript p, e.g.,

?e'-P 'thy'), which to their pre-aspirates is overruling aspirate the stop types of initial w > w'-

Other phonological sketches in the

II. Grammatical selection involving (laut), 3) reduplication into a) suffixation (aries), d) content

1. Pure Selection involving a word or morpheme class-properties (nouns, 3) verbs may have a series of variations of inflection but not quite the same may be used as are invariants, adjective will k'ap'a 'it is conditionals (bases verbs, and interjunctions, par

ʔe'-P 'thy'), which change initial p to 'p and also change the other stops to their pre-aspirates. The sandhi attendant upon some morphological processes is overridden by morphological rules, e.g., Class 5 verbs pre-aspirate the stops of certain suffixes but not of others. A few irregular ~~types~~ types of sandhi are of rare occurrence in petrified forms, e.g., initial w > ʔw'.

Other phonological processes are less strictly mechanical and will be sketched in the next section.

II. Grammatical Operations These in Hopi are 1) pure selection, and selection involving the operations of 2) modulation (inner change, or ablaut), 3) reduplication, 4) nexus, 5) pause technique. Nexus is divisible into a) suffixation, b) prefixation, c) annexation (compounding, auxiliaries), d) context nexus (syntactic nexus, adverb nexus).

1. Pure Selection: Parts of Speech This operation consists in choosing a word or morpheme belonging to a particular class having grammatical class-properties. The word-classes (parts of speech) are 1) nouns, 2) pronouns, 3) verbs, 4) invariants. All but invariants are paradigmatic, i.e., may have a series of forms or <sup>f</sup>inflections. Even invariants may undergo the variations of pause technique, but no others. Nouns have one system of inflection; verbs a different system. Pronouns have inflections like but not quite the same as those of nouns. All classes overlap; thus nouns may be used as verbs, certain verb-forms are verbal nouns, some pronouns are invariants, many invariants are isolated verb or noun forms. The term adjective will be used herein, but formally they are verbs or nouns, e.g., kʷaŋʷa 'it is sweet', kʷaŋʷa <sup>single space</sup> ʷiki 'sweet bread'. Invariants include relationals (bases with locational case-suffixes, including postpositions), adverbs, and interjections. Adverbs include, besides typical adverbs, conjunctions, particles, modalizers, which impart modal nuances to verbs, and

inceptors or sentence-introducers.

Punctual and Tensive In addition to these word-classes we must note a great ideological classification that cuts across them, dividing all expressions of position in space or time into two categories which I call punctual and tensive. Here Hopi thought-forms depart most from English. In place of distinct reference to either space or time, we have rather reference to extension, which is both space-like and time-like, versus non-extension or point-location. Location, state, and action are treated as one-dimensional or punctual (i.e., the center of interest is located only by position as a point) versus multi-dimensional or tensive, i.e., located as having extension, which according to context may be as a line, over an area, in three dimensions, or with duration in time added to any one of the spatial forms including the space point. Because of the unification of space and time in extension, expression of singularity or momentaneousness requires a punctual form; expressions of plurality, distribution, expansiveness, durativeness, or repetition require a tensive form. Some plurals may be accompanied by punctual forms to indicate that the state of each unit is denoted as punctual. The introduction of tensivity into an ordinary noun or other static word will usually imply plurality; in a verb it will imply durativeness and often also plurality of action involving plurality of participating entities, subject or object or both. While this distinction pervades all Hopi grammar, there is no one regular method of expressing it. In nouns and verbs we find that usually the punctual is the simpler form and that the tensive often shows reduplication but there is much irregularity. Moreover, the distinction of punctual and tensive does not appear simply as such but is in nouns a matter of singularity vs. plurality and in verbs of punctual aspect vs., not one tensive form, but a number of aspect and aspect-voice forms, all of them tensive. Among invariants the distinction is expressed by separate words,

whose uses at f  
locative relatio  
pa ki'y 'epa  
'a 'he was a  
Thus 'a locat  
the several hour  
to a number of  
'he walked by h  
Tensivity may be  
'a) is used lik  
'it was stuck on

Selection is  
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suited to the p  
idiomatic; i.e.  
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Hopi will prefer  
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Suppletion is  
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whose uses at first puzzle the Hopi student. To illustrate: the simple locative relationals are ?sps? (punctual) and ?ana (tensive). Hence pam ki'y ?sps? 'he was (or is) at his house', but pam ki.'kihèt ?ana 'he was at the houses', meaning 'he has visited several houses'. Thus ?ana locates the individual on a path in space-time which includes the several houses. This idea of the extended space-time locus answers to a number of different expressions in English; e.g., wa'yma ki'y ?ana 'he walked by his house', wene sijnmey ?ana 'he stood among the people'. Tensivity may be equivalent to indefiniteness; thus ?ana (sentence-medial ?an) is used like the English 'on' of indefinite attachment; ?an pi'ta 'it was stuck on', ?an la'ḡákna 'he pulled on it, (or) at it'.

Selection is the only operation that occurs pure, for all others, such as suffixation and syntactic joining, involve also selection of elements suited to the process. It must be noted that much selection in Hopi is idiomatic; i.e., selection of a certain combination results in a meaning not to be expected from grammatical parallels. Thus maki'?yma, a form from maqqa 'give', ought to mean 'he is just about to give it' but actually means 'he is sure it is going to belong to him'. Again, idiomatic Hopi will prefer a certain form where another form would seem more 'regular'; e.g., tḡwa is the ordinary verb 'see', but to see a person is ?aw yḡri, literally, 'look at him'. Hopi is extremely idiomatic, and hence no purely formal grammar can give an adequate account of actual speech. The ideal Hopi grammar would be a grammatical dictionary that would give the idiomatic uses of each word.

Suppletion is a form of selection partly idiomatic and partly systematic, in which change of stem takes the place of the regular operation otherwise used in a system of forms, e.g., English go : went. In Hopi it is common in one usage only: plural vs. singular forms of verbs.

2. Modulation: its phonology Phonology and the operation of modulation are closely interwoven, and modulatory phonology will be considered here. It is controlled by position of the phoneme in the word relative to the root or paradigmatic nucleus. A paradigmatic word contains four basic internal positions: 1) prefix, 2) root-internal, 3) root-terminal, 4) suffix. A position may be unfilled, or filled by one or more elements, an element being either an open syllable or a 'contracted element'. To 'contract' an element is to elide the vowel of an open-syllable element, except for these contractions: ʔi > ʔy, hi > hy, o-wi > o-wy, ko > kʷ (not kw). In contraction p > v (sometimes also p > v), ɲʷ, ɲ > ɲ, de-sonantization may or may not occur, la sometimes > l, L, and sometimes > w. Root-terminal is the position of the last element in a root of more than one element, e.g., ʔe-'ta, na-ʔ-ta-ya, ʔe-ʔe-c-pi; and other elements of a root are root-internal, e.g., ʔe-'ta, na-ʔ-ta-ya, ʔe-ʔe-c-pi; these forms < ʔe'ta 'to close'. Certain phonologic principles apply only to root-terminal position. The most important is that the elements ti, 'ti cannot occur in true root-terminal position (a few words like we'ti 'woman' have an apparent root-terminal that is probably a petrified one-element root in a compound), but > ci, 'ci, and on contraction g. Thus so-ma 'tie' > passive so-mi-l-ti, but ʔe-'ta > passive ʔe-'ci-l-ti. The other rules of root-terminal are not general enough to need mention in a sketch, and the same for the phonology of suffix-position.

Modulation or ablaut chiefly affects root-terminal elements. The forms of root-terminal modulation are 1) contraction (soma > son), with certain exceptions the contracted element is de-sonantized before a surd in close nexus (soM-ta), 2) iotization, change of terminal a or e to i (soma > semi, təke > təki), 3) terminal stressing (pala > pala'), often with change of -ya, -ka to ya', ka'.

Modulation in root-internal position consists of reducing long vowels

to medium, and changes of vowel terminal, the s tion both root- change: transit base. Various rules (see IV V

3. Reduplica syllable of the duplicated elem chief patterns bū, etc.), Type pavab, with pol > pava'b, polys

Back redupli bula > bula'la. is of pattern b

4. Nexus C tion except for open or context occurs between It may occur in

4a. Prefix ʔi- 'my' and ga and may rearran tion or elision fixes are almost

4b. Suffi or not sandhi c

to medium, and other less common length changes, and rare irregular changes of vowel. Modulation in suffix-position is similar to root-terminal, the suffix-ending base behaving as an extended root. Iotization both root-terminally and in suffixes produces the same semantic change: transitive to intransitive, often passive, often a noun-like base. Various suffixes combine with each other according to special rules (see IV Verbs).

3. Reduplication Front reduplication is repetition of the first syllable of the word, often combined with reduction of vowels in the reduplicated elements, stress shifts, and root-terminal contraction. The chief patterns are: Type A pabu or pa'bu > pa'vabu, pa'vabu (or pa'vabû, etc.), Type B pabu, pabu > pavbu, pavbu, Type C pabu, pa'bu > pavab, with polysyllabic roots pa'bûbu, pabu'bu > pa'vabûb, Type D pabu > pava'b, polysyllabic pa'bûbu, pabu'bu > pava'wub.

Back reduplication affects root-terminal syllable and is of pattern bula > bula'la. Pausal reduplication occurs only in pause technique and is of pattern bula > bula'â.

4. Nexus Close nexus comprises prefixation, suffixation, and annexation except for the open-compound type of annex which forms a link with open or context nexus comprising syntactic and adverb nexus. Sandhi occurs between the components in close nexus but not in true open nexus. It may occur in open compounds, depending on the degree of 'closeness'.

4a. Prefixation Hopi uses but few prefixes. All prefixes except \*i- 'my' and qa- 'not' take primary stress (\*i- does so when in the penult) and may rearrange the stresses in the root, resulting sometimes in reduction or elision of vowels in the root (Iâ), though not in suffixes. Prefixes are almost never superimposed.

4b. Suffixation Hopi uses many suffixes often superimposed. Whether or not sandhi occurs between root and suffix depends on special morphology;

thus the instrumentive suffix -pi is never spirantized, while the adessive case suffix appears as -pa or -va according to the sandhi of the preceding root (see also I7). Suffixes on noun or verb bases never have primary stress (excluding pause technique) and consequently never rearrange the stresses in the root nor cause mechanical reduction. Contraction accompanying a certain suffix is accessory modulation.

40. Annexation Annexation is word-compounding in its broadest sense: the use of a word as a modifier or auxiliary of another with only juxtaposition to indicate the relationship. Hopi uses it extensively, nearly always according to the principle that the modifier precedes the word modified. 'Pre-nexation' and 'pre-nex' refer to a preceding component of annexation with respect to a component following it, or 'post-nexed' to it. There are four main types of annexations: attributions (adjective + noun), compounds (in the restricted sense, noun + noun), incorporations (modifier + verb), sub-nexations (verb + auxiliary).

In adjectival predication, e.g. 'that bird is red' pam ciro pala, the predicate adjective ('is red', pala) is a variety of verb. When the adjective is used in attribution, as in 'a red bird', an annex form is used, pala' cirò. The pre-nex, if a vowel-ending bisyllable, takes final stress; otherwise it contracts if contractible, e.g., qò'mavi 'it is black', qò'mav ciro 'a black bird'. The only high stress in the complex is that of the pre-nex, and all original high stress in the post-nex becomes low. Original stress on an open first syllable is thrown back one syllable after an oxytone pre-nex, as in pala' cirò (but pala' vátqa 'red squash' < patqa). Long vowels in post-nex reduce to medium. Any number of adjectives may be thus combined, all after the first becoming post-nexes, e.g., loma' valà cirò 'a pretty red bird', weko' loma' valà cirò 'a big, pretty red bird'. Noun-prefixes go on the first member of the complex, e.g., 'iloma' valà cirò 'my pretty red bird'. Reduplication for plural applies only to the

noun: 'iweko' vòv  
sandhi in attribution  
and in being one  
between component  
pause may be made  
any one of the com-  
ing a word that o-  
in annexation dif-  
prosodic requirem-  
are simply words  
the writing of sp-  
word.

Compounds of n-  
pounds are much l-  
connection that m-  
tinct demarcation,  
vocabulary word,  
to modify another  
typical close com-  
ing emerges, e.g.  
or close compound  
special variation  
not bubu' but buh  
may optionally co-  
usually lacks hig-  
iteration of an at-  
post-nex, e.g., ka  
petrified compou-  
oasis < si-p 'flc

noun: 'iweko' vbyyo 'my big knives'. Spirantization of p is the only sandhi in attribution. The whole complex is like one word in stress-form and in being one breath-group; i.e., ordinarily no greater pauses occur between components than between syllables of the same word. And yet a pause may be made if desired with natural effect after any component, and any one of the components may be pronounced alone and be intelligible, being a word that occurs alone (ciro 'a bird' or 'it is a bird'). The form in annexation differs from the form in isolation only by subscribing to the prosodic requirements of a type of phrase. The components in attribution are simply words according to the methodology used herein, and this requires the writing of spaces between them. The whole complex is a phrase, not a word.

Compounds of nouns use a noun (or root) to modify a noun, and Hopi compounds are much like English or German ones in the varieties of logical connection that may be thus expressed. Hopi shows two types without distinct demarcation, open and close. A typical open compound is not a stock vocabulary word, but a phrase made up for the occasion by using some noun to modify another noun, e.g., ciro' voyb or ciro' poyb 'a bird knife'. A typical close compound is a vocabulary word in which a new, unitary meaning emerges, e.g., cö'qa 'clay', si'va 'silver', cöqa'sivà 'nickel'. Open or close compounds follow the same pattern as attributions, with certain special variations. Most nouns of bubu-form have a prenex-form which is not bubu' but bub, e.g., si'vsonà 'silver-band, bracelet'. Open compounds may optionally omit sandhi, or other alteration. However, the postnex usually lacks high stress. Close compounds usually have the amount of alteration of an attribution, and often more, including vowel elision (I6) in postnex, e.g., keri 'rump', cemo 'mound', keri'emo 'buttock'. The older, petrified compounds show pre-aspirative sandhi, e.g., si'pa 'flower-spring, oasis < si-P 'flower'. The Class C noun-suffix -he in close compounds is

dropped in both prenex and postnex (e.g., si'pa < sihe, pa'he), in open compounds it may be dropped or not. The Class D suffix <sup>-w</sup> drops in the prenex of many nouns, e.g., me'yaw 'moon', me'ytala 'moonlight' (may contr. < me'ya). Reduplication is regularly on the postnex, e.g., pa'qalà 'water-edge, shore', pl. pa'qàqia, but also is found on the initial of petrified compounds; hoklō 'forest', pl. ho'hàklō. The prenex of a close compound may be a verb-stem (e.g., paq- 'weep', pa'qvōsi 'tear') or an adjective yielding a different sense from attribution (e.g., qals'msa 'primary feather', but qals/masà 'strong wing'). Among close compounds are found a few stems not occurring free, e.g., te<sup>-D</sup> 'stone, ground'. Certain close <sup>post</sup> ~~pre~~nexes have become stereotyped and freely usable like suffixes. The chief ones are -qōlō, -qlō collective plural for plants, -hoya, -hya diminutive, -vōsi small object (lit. 'eye, seed'), -vō'ko animal pet ('dog').

Incorporations closely resemble noun compounds except that the postnex is a verb. They have the same phonologic pattern, prenex form of noun, and distinction of open and close. A noun modifier of a transitive verb expresses usually generic object and this form is called 'incorporated object', e.g., ni'na 'he kills it (one thing)', ciro' nina 'he bird-kills, kills a bird', ca'v nina 'he kills a deer'. This form is much less used than 'syntactic object', e.g., cirot ni'na. Close incorporations have somewhat specialized, unitary meanings. In them especially we may have noun-prenex as inseparable participant in or 'subject' of an intransitive verb, making it impersonal, e.g., sak'i 'it gets broken down', ki'he 'house' kisk'i 'it (the house) is dilapidated, house-dilapidation has occurred'. The prenex itself may be a verb-base, used as an adverb, e.g., na'e'y •kidi 'they arrived hidingly, sneaked up'; the verbal 'infinitive' is such a prenex (IV7, 8). The only incorporable pronouns are pan, yan, hin (demonstratives).

Subnexation is a peculiar specialized form of postnexation confined to

*1 breath-group, clusters pronounced with shewa*

the 'auxiliary verb  
and other annexati  
and by permitting  
such as occur in ne  
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4d. Context ne  
In syntactic nexu  
in the actual situ  
sessed, etc. These  
a matter of select  
of word order. Th  
sessed, subject an  
may either precede  
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tence but do not s  
words.

5. Pause Techn  
an utterance that  
ble without sense  
in itself, e.g., '  
ly occurred contex  
is that?' A word  
wari 'he ran', ta  
nexus, and functio  
The ending of a Ho  
pitch, including i

the 'auxiliary verbs' -ni-, -ya-, -man-. It differs from both suffixation and other annexation in that both components may take high stress together, and by permitting clusters (e.g., ḡk-n) not permissible within words, and such as occur in nexus. Herein it will always be marked by a hyphen, simply as a visual aid to analysis.

4d. Context nexus is the ordinary grouping of words into a sentence. In syntactic nexus the words are in relations parallel to the relations in the actual situation, e.g., subject, verb, object, possessor and possessed, etc. These relations are a matter of rules of syntax, which are a matter of selection, of morphology (noun cases, verb modes, etc.), and of word order. The general rules of order are: possessor precedes possessed, subject and personal-pronoun object precede verb (other objects may either precede or follow), relationals like to, from, over, precede verbs and follow nouns (postpositions). Personal-pronoun subject and object are expressed by syntactic nexus, except that lack of other reference implies third-person pronoun subject and object. Adverb nexus is inclusion in the sentence of words which affect the verb or the whole sentence but do not stand in specific situational relationships with other words.

5. Pause Technique: Sentences A sentence may be roughly defined as an utterance that may be followed by a protracted pause and be intelligible without sense of incompleteness. A major sentence is intelligible in itself, e.g., 'the man ran', a minor sentence intelligible in a recently occurred context, e.g., 'yes', or 'a man' in reply to the question 'what is that?' A word is either (a) a minimal major or minor sentence, e.g., wari 'he ran', ta'qa 'a man', or (b) a sentence-element of analogous form, nexus, and functional class (II) with other words capable of definition (g). The ending of a Hopi sentence is called pause, and is marked by falling pitch, including in questions. Pause technique is terminal inflection of

the whole sentence, applied to the final word -- spoken punctuation. There are five types of pause; simple, copulative, exclamative, imperative, and exclamative-imperative. If we add as the first of this scale the non-pause or sentence-medial form of a word we have the entire punctuation-series. Words have a classification according as they are more or less fully inflected in this series, thus:

A. uniformals These have medial, simple-pause, and copulative forms the same, e.g., ni'na 'he killed it', ta'qa 'man', which also is the copulative 'it is a man', e.g., in reply to 'what is that?' or in, e.g., 'aya'm ta'qa 'it is (or there is) a man over there'. This class includes all vowel-ending verbs of the first six verb-classes, vowel-ending adjectives of class 7, and unpossessed nominative case of nouns except those of classes D, E, F.

B. biformals These have a first (medial-pausal) and a second (pausal-copulative) form, e.g., ta'taqt ye'te 'men ran' but ta''taqte 'they are men' or 'it is some men', mom<sup>n</sup>'it ta''taqte 'the chiefs are men', ta''taqt mo'm<sup>n</sup>'ite 'the men are chiefs'. Both forms may be used as pausal in non-copulative sentences, e.g., ni'na cirot or ni'na ci'rotà 'he killed a bird', but the copulative is somewhat more emphatic.

C. triformals These have a first (medial), second (simple-pausal), and third (pausal-copulative and emphatic) form, e.g., 'ikiy 'q<sup>v</sup> q<sup>te</sup> or q<sup>te</sup> 'ikiy 'q<sup>s</sup>' 'he stayed (sat) at my house', but 'ikiy 'q<sup>v</sup>'e 'he was (is) at my house'. Pluriformality is largely a property of certain suffixes, and on first citation of such words and suffixes their longer forms will be placed in parentheses, e.g., -t (-te) plural suf., 'q<sup>v</sup> ('q<sup>s</sup>', 'q<sup>v</sup>'e) post-position 'at'.

Copulative or nominal sentences are the regular Hopi method of expressing 'is', 'goes', and 'comes', when the ~~regular Hopi method of expressing~~ 'going' and 'coming' are purely relational and abstract; denoting this

colorless relative  
e.g., 'ikiy 'awi  
to my house' (II)  
means of the 'sub

Exclamatives

copulative form  
'a man!', ta''ta  
An alternative enclitic  
may replace -ty.  
tive stress except  
and on medium open

The end of a  
followed by enclitic  
'why are you (pl)

Imperatives

exclamative (excl)  
in quick speech  
ni'na'è 'kill it'  
-'u remain unchanged

The above is  
which simply adds  
it!

III. Nouns and

1. Basic pronouns

illustrate the basic  
Being nearly all  
al form in the t

colorless relative motion by relationals (case-forms and postpositions), e.g., ʔikiy ʔawiʔ 'he went to my house', contrast ʔikiy ʔaw wari 'he ran to my house' (III 2). Such sentences may be conjugated like true verbs by means of the 'subnexed' auxiliary verbs.

Exclamatives Exclamative pause is produced by suffixing -y, using the copulative form where present; ni·'náy 'by jingo, he killed it!', ta·'qáy 'a man!', ta·'taqtáy 'gee, they're men!', ʔikiy ʔə·vʔáy 'he's at my house!' An alternative ending -i [-f, with dull timbre] often replaces -iy, and -é may replace -áy. Original primary stress is retained along with exclamative stress except that it is lost on a short open penult (ciŕáy 'a bird!') and on medium open penult of verbs only (soŋáy 'he tied it!').

The end of a direct quotation is usually marked by the exclamative followed by enclitic yáw with no pause: ʔema hiŋok yə·ntáy yáw ʔame·mi kíta 'why are you (pl.) like this?' said he to them.' This form may also use a modified exclamative omitting -y but retaining the final falling stress.

Imperatives An imperative sentence can be made from the same base as the exclamative (except for class 1 verbs, IV 8) by pausal reduplication (II 3), in quick speech or after a long word sometimes eliding -uʔu to -ʔu. Thus ni·'naʔá 'kill it!', ta·'taqteʔá 'be men!' Copulatives already ending in -ʔu remain unchanged. Transitive verbs have an alternative form (IV 8).

The above is a polite or request imperative. The exclamative-imperative, which simply adds exclamative technique, is a command form; ni·'na·áy 'kill it!'

### III. Nouns and Pronouns and their Syntax

1. Basic pronouns These pronouns, the personals and certain others, will illustrate the basic case-declension, which most nouns possess only in part. Being nearly all pluriformals, their pausal forms are placed below the medial form in the table.

Obligatory cases		Oblique (optional) cases						
Pronoun	Nominative	Objective	Possessive	Locative (at, in)	Allative (to)	Illative (into)	Ablative (from, in)	Base
'I, me, he, she'	ne' ne'ʔe	ney ne'ye	ʔi-	ʔine''pe ʔine''peʔ ʔine''ye	ʔine'mi ʔine'mi' ʔine'mi'i	ʔine'miq ʔine'miqa ʔine'miq'a	ʔine'ʔaq ʔine'ʔaqo	ʔine'-p
'we'	ʔitam ʔi'tamə ʔi'taməʔ	ʔita'mey ʔita'meyə	ʔita'-p	ʔita'mə'pe etc. as above	ʔita'məmi etc. as above	ʔita'məmiq etc. as above	ʔita'məʔaq	ʔita'mə'-p
'thou'	ʔem ʔemi' ʔem'i	ʔen ʔe'ʔe	ʔe'-p	ʔe'pe ʔe'pe' ʔevʔe	ʔemi ʔemi' ʔe'mi'i	ʔemiq ʔe'miqa ʔe'miq'a	ʔe'ʔaq ʔe'ʔaqo	ʔe'-p
'ye'	ʔema ʔema' ʔe'ma'ə	ʔemey ʔe'meyə	ʔeme'-p	ʔeme''pe etc.	ʔeme'mi etc.	ʔeme'miq etc.	ʔeme'ʔaq etc.	ʔeme'-p
'he, it'	—	—	—	ʔəv ʔəpə' ʔəv'e	ʔaw ʔawi' ʔaw'i	ʔək ʔək'a' ʔək'a	ʔəʔaq, ʔənk ʔə'ʔaqo, ʔəh- qo	ʔə'-p
'they'	—	—	—	ʔame''pe etc.	ʔame'mi etc.	ʔame'miq etc.	ʔame'məʔaq etc.	ʔame'-p
'that, he, there'	pəta pəmi' pəmi'	pəta pəta pət'a	—	pəv pəpə' pəv'e	pəso pəso' pə'so'ə	pəso pə'so'ə pə'ʔso'ə	pəʔaq, pənk etc.	pa'-p
'those, they'	pəma pəma' pə'ma'ə	pəmey pə'meyə	—	—	—	—	—	—
'this, he, here'	ʔi' ʔi' ʔi'i	ʔit ʔita ʔit'a	—	ʔəv ʔəpə' ʔəv'e	pəw pəwi' pəw'i	yekiq, yek ye'kiqa ye'kiq'a	yəʔaq, yənk etc.	ya'-p
'these'	ʔima ʔima' ʔi'ma'ə	ʔimey ʔi'meyə	—	—	—	—	—	—

'yonder, place'	—	—	—	ʔayə'm ʔayə'mo' ʔayə'm'o	ʔayə'ʔ ʔayə'ʔo	ʔayə'k ʔayə'k'a' ʔayə'k'a	ʔaya'q ʔaya'ʔqo	ʔaya'-
reflexive and reciprocals	—	na''-	—	na'y na'mi' na'mi'i	na'mi na'mi' na'mi'i	na'miq etc.	na'ʔk etc.	na''-

'he here'	'it 'ita 'it'a	y'v y'v'e y'v'e	pew pewi? pew'i	ye'kiqa ye'kiq'a ye'kiq'a	etc.
'these 'ima 'i'ma'	'imey 'i'mey'e				

'yonder 'place'		'aya'k 'aya'k'a 'aya'k'a	'aya'q 'aya'q'o	'aya'q 'aya'q'o	'aya'-
reflex- ive and recipro- cal	na'-	na'y 'aya'm 'aya'm'o 'aya'm'o	na'mi na'mi' na'mi'?	na'miq etc.	na'-

'to' for an invisible  
relationship,

Stressed possessive prefixes change the original high stress of a noun to low but do not displace it or cause elision.

2. Use of the Cases Nominative: subject of sentence, object of imperative transitive verbs, absolute, vocative, adjective, and source of the pre-nex for compounding. Objective: object of transitive verbs (non-imperative) and postpositions, subject of the second disjunctive mode of verbs, possessive or genitive, except for the 1st and 2nd person pronouns which have a true possessive, prefixed to the possessed noun, yet for these it is the predicate possessive: ne'ye 'it is mine'. Copulative objective inanimates express the subject's goal: ne' no'vath 'I'm for food, I'm after food' or 'I want food'. Addition of haqam 'at some place' or other locatives changes the meaning to 'I get (or got) food'. These two cases are obligatory for use not specific as to case, i.e., there is no caseless form.

The basic oblique case-suffixes above are -va/-'ps, -mi, -miq, -naq, to which may be added adjective -va/-'pa 'on (the extent of)'. Allative: 'to (of motion and direction)', indirect object. Illative: 'into', also 'by, with (of passive instrument)'. Ablative: (a) 'from', without distance-terms it denotes separation to a moderate extent, hence, in some contexts (b) 'back from, behind, after, following' (pam ?e'naqö 'he's following you'), (c) ('vascular ablative') 'in' of enclosure requiring an opening process for discovery, i.e., in containers, mouths, bodies, the ground, etc., not in rooms. The -naq, -naqö forms in pronouns (not nouns) are usually elided to -nk, -nqö -- this is shown only a few places in the table, to save space.

Copulative oblique cases Copulative allative means 'goes to ...', but in the this-form means 'comes to it here' or simply 'comes', e.g., ps'w'fi 'come here!' (II 5), pam ps'w'fi 'he's coming'. The illative is not so much used copulatively as with a concrete verb, e.g., paki 'one goes in' in default of another verb of motion. Copulative ablative means 'comes from ...', not 'is in' nor 'comes out of', these meanings requiring concrete verbs, e.g.,

paki'wta 'one is noted (II 5), formally, not formal verb between inside and with another idea pam ?emi ?anqö 'I

Other case-suffixes

that may be used not very freely only to 3rd pers. ing see II 1, wa general interior buildings and rooms nominative meaning -cvi'ö (III 7) -mem (memä) 'with' and copulatively text. Benefactive restricted to 3rd meaning 'from', ation: ?ah ta'la that she is beautiful the sense of 'co 'like me', ?an ly used. Case-s basic set like - corresponding ob

paki'wta 'one is inside' or yama 'one goes out', with ablative. As already noted (II 5), for merely relational motion Hopi uses case-forms copulatively, not formal verbs. For concrete phenomena, which include interchange between inside and outside, formal verbs are needed. The 'an̄k form used with another idea of motion changes the meaning from 'go' to 'come', e.g., pam 'emi 'an̄qō 'he comes to you', ta'ca 'an̄k wari 'the man comes running'.

Other case-suffixes Besides the above case-suffixes are many others that may be used just as freely upon the above pronominal bases, though not very freely upon nouns. Tensive locative: -n̄ (-na, -n̄'a) confined mostly to 3rd pers. 'an̄, pan̄, yan̄, and 'yonder' irreg. 'ays'? (ays'?), for meaning see II 1, wa'yama kiy 'ana, etc. Inessive: -sonv̄t̄ (-v̄t̄?, -v̄t̄'e) 'in', general interiority, immersion. 2nd Inessive: -v̄ave / -p̄ave (-v̄e?, etc.) 'in' buildings and roads. The form 'a''p̄ave means 'inside' and is secondarily a nominative meaning 'room'. Superessive: -ove (ove? etc.) or -ovi (-ovi?, -ovi'ō) (III 7) 'above, on top of', also 'by', personal agent. Sociative: -mem (mem̄) 'with, and' (the 'and' used to link two nouns); it is tensive, and copulatively means 'is with', 'keeps with', 'goes with' according to context. Benefactive: -nam (-naml), 3rd pers. sing. 'ḡnam, 'for'. Partitive: restricted to 3rd pers. 'ah ('aho), pah, yah. It is tensive of the ablative, meaning 'from', 'coming', of extended, radiative, or otherwise tensive separation: 'ah ta'la 'it shines forth from it' or 'from her', an idiom meaning that she is beautiful. pah is the partitive 'some', and 'ah like 'an̄k gives the sense of 'come' to verbs. Simulative: -n̄ (-nai) and -nta 'like': 'ina'n̄ 'like me', 'an̄ 'like him'. There are many other such suffixes less frequently used. Case-suffixes are single or compound, i.e., ending in one of the basic set like -sonv̄t̄, -ove. These basic endings may be interchanged with corresponding change in idea: -sonm̄ 'to and into', -ova 'over, across'.

### 3. Basic Noun Inflections

In the table prefixes and suffixes are in bold-face, and every suffix is bifurcated and shown in its formal and shown in its pausal form. The medial drops the final vowel of the pausal, while low stress on this final vowel <sup>advances</sup> ~~recedes~~ one syllable, or drops after a stressed penult. The 'our' and 'your' forms, not shown above, are like the 'thy' form, simply substituting their own prefixes \*ita<sup>-p</sup> and \*ame<sup>-p</sup>. The 3rd pers. reaffirmative objective case indicates that the possessor is the one previously referred to (Latin suus), e.g., ta'qa pa'say 'aw p'ite 'the man arrived at his field'. The simple 3rd person, however, is used after an objective used as genitive: ta'qat pa'sa'at 'the man's field'. Words with a consonant-cluster before the final vowel do not usually con-

(dual inflected like singular, pa'sav'ite'atā, etc.)

	Singular		Class A		Plural	
	Nom.	Obj.	Nom.	Obj.	Nom.	Obj.
<b>Absolute</b>	pa'sa	pa'satā	pa'sa	pa'satā	pa'sa	pa'satā
<b>Possessed</b>						
<b>'my'</b>	2iva'sa	2iva'saye	2iva'vasa	2iva'vasaye	2iva'vasa	2iva'vasaye
<b>'thy'</b>	2e'pasa	2e'paseye	2e'pa'vasa	2e'pa'vasaye	2e'pa'vasa	2e'pa'vasaye
<b>'his, their'</b> <b>reaffirmative</b>		pa'saye			pa'vasaye	
<b>'his'</b>	pa'sa'atā	pa'sayātā	pa'vasa'atā	pa'vasayātā	pa'vasa'atā	pa'vasayātā
<b>'his, their'</b>			pa'sam'ita	pa'sam'itaye	pa'sam'ita	pa'sam'itaye
			pa'vasam'ita	pa'vasam'itaye	pa'vasam'ita	pa'vasam'itaye
<b>prenex</b>	pa's		pa'vasa'pasa	pa'vasa'paseye	pa'vasa'pasa	pa'vasa'paseye
<b>dual</b>	pa'sav'ite	pa'sav'iteye				

### Basic Noun Inflections (pausal forms only)

-22-

tract in prenex or Cl. Class A words of form sometimes bubu) have and similarly shift suffixes which in the form add to the numberables, e.g., qōtō 'his head'. words over two syllables different types of but usually the regular for stressed penult e.g., masi'vi 'ghost' mamsivt; ma'cak'a 'pl. med. mama'cak't. numerous Cl. B irregular e.g., po'ko 'dog' > cjro 'bird' > cjroh' 'man' > ta'taqt. Cl. forms plural by -m out reduplication, -mēy (-mēye) in objective -mat, etc. in 3rd person e.g., qawa'yo 'horse' 'younger sister', y 'bird', pl. qawa'yom ya'pam. Cl. B nouns mate and Cl. A nouns including as such body-parts.



Class C nouns end in -he and inflect much like Cl. A, e.g., ki'he 'house', 3rd pers. ki'heʔt, pl. ki'kihè; pqhe 'road', 3rd pers. pqheʔat, pl. pqyhe; except that -he drops before the suffix -y (-ye) and in the prenex, and in close compounds the postnex also, e.g., qch-ki 'fire-place'. They include a few animates which form plurals like Cl. B thus: k'a'he 'eagle', pl. k'a'k'ahèt (ʔte).

Class D nouns end in -w (-we, -wʔe) and form the absolute objective like the possessed objective in -y (-ye). They are mostly animates which pluralize like Cl. B, e.g., pa'kiw 'fish', pl. pa'vaklwt. Those in -aw drop -w in the prenex and contract; and may pluralize either with or without such reduction, e.g., ho'nâw 'bear', prenex ho'n, pl. ho'honâwt or hohonâwt; so do a few others: ca'viw 'antelope, small deer' > ca'v, ca'câwt. The few inanimates, except ʔo'mâw 'cloud', pluralize like Cl. A: me'yâw 'moon', prenex me'y, pl. me'meyâw.

Class E nouns end in -ŋ (-ŋʔe, -ŋwʔe) or ~~in -ŋʔe~~, in -ŋʔe (-ŋwʔe), form the absolute objective in -y (-ye) and pluralize like B usually: hekan 'wind', prenex hekan, pl. he'hekânŋt; paŋʔe 'mountain sheep' > pa'ŋ, pavaŋt.

Class F nouns have only the possessed forms and comprise the stems na- 'father', ye- 'mother', ti- 'son, daughter', k'a- 'grandfather', so- 'grandmother', ka- 'paternal aunt', ma- 'hand-and-arm'. The 1st and 2nd persons are thus: ʔina (ʔinaʔ, ʔi'naʔ) obj. ʔinay, etc., with 'mother' irregular in these persons by changing y to ŋ; ʔiŋe 'mother'. For a quasi-absolute one uses the 'their' form: naʔam 'a father', yemat 'mothers'. The 1st and 2nd persons take the B 1 plural: ʔe'kʔam 'thy grandfathers'. Besides these classes there are the verbal nouns; agentives, etc., see IV.

4. Plurals Many animates have two kinds of plural, the regular reduplicated plural and an unreduplicated pausal in -m, -t, or -te (-teʔ),

-teʔe), which last number only, e.g., using plural a co 'pine trees, pine generic (like Engl

5. Oblique cases suffix to the preno no oblique cases a mʔa 'mouth' has t pa'he 'water, spri take all. For eve same meaning which cluding all posses case form with a n declined: nom. paŋ ill. paŋsok ki'mic only in the final

6. Postpositions nouns or pronouns, in III 2. They at the 3rd person pre with plurality of suffix inseparabl only in these obl 'into up above', gesting a verb de special use of a e.g., paŋyot yawka

Comparison of

-te'e), which last replaces -he of Cl. C. The paucal implies a small number only, e.g., k'a'te 'several eagles'. Names of plants prefer to using plural a collective which postnexes -qöLö, -qlö, e.g., lëqö'qöLö 'pine trees, pine grove'. The singular is freely used as a plural or a generic (like English 'fish') where no ambiguity results.

5. Oblique cases of nouns occur in absolute form only, adding the case-suffix to the prenex, which is reduplicated for plural. Most nouns have no oblique cases and those that do usually have only a certain few, e.g., mö'a 'mouth' has the ablative, mö'a'naq, while eqmo 'hill', tëk'a 'ground' pa'he 'water, spring' can take most case-suffixes, and ki'he 'house' can take all. For every case-suffix there is a postposition with exactly the same meaning which is used instead where the suffix cannot be applied, including <sup>with</sup> all possessed nouns. The basic demonstrative pronouns agree in case form with a noun which they may modify, e.g., 'that house' is thus declined: nom. pam ki'he, obj. pët ki'het, loc. pëv ki've, all. paŋso ki'mi, ill. paŋsok ki'miq, abl. paŋk ki'naq. Compound suffixes require agreement only in the final element; e.g., inessive-allative paŋso ki'sonmi, etc.

6. Postpositions or relationals are used after the objective case of nouns or pronouns, before verbs like adverbs, or copulatively as explained in III 2. They are of these types: (1) case-suffix on base 'a-P, i.e., the 3rd person pronominal cases 'av, 'aw, 'ak, etc., (optionally agreeing with plurality of noun) ('ame'mi etc.); (2) like (1) in form but apparent suffix inseparable, e.g., 'a'tö 'under'; (3) case-suffix on a stem used only in these oblique cases like 'o- 'height', 'atka- 'depth', > 'o'miq 'into up above', etc.; (4) no constant form but usually with pausal suggesting a verb dependent mode, e.g., 'i'paq ('i''pàqa) 'outside of'; (5) special use of a verb mode, e.g., yawkaŋ 'carrying', equivalent to 'with', e.g., pqyot yawkaŋ pje 'he arrived with the knife'.

Comparison of adjectives, etc., is by means of a relational suffix

ki'he  
s.  
(-ye)  
, qöh-ki  
like Cl. B  
jective  
es which  
se in -aw  
th or with-  
nonawt or  
v, cacavt.  
A: me-'yâw  
n'v'e (-n'v'e)  
ually:  
p' > pa'n  
stems  
er', so-  
and 2nd  
'mother'  
ather',  
'e''k'am  
nouns;  
egular  
-te (-te')

-peni''qaY with 3rd-person postposition form ʔevni''qaY 'than, more than, surpassing', e.g., moŋ'i ʔine''peni''qaY we'pa 'the chief more-than-me is tall' -- 'the chief is taller than I'; ma'na siway ʔevni''qaY ʔa'nsawa'ri 'the girl ran faster (ʔaʔne-) than her young sister'. Superlative is expressed only by saying 'than they', 'than all', or the like.

7. Place names are ipso facto in the locative case, and most Hopi place names end in -vi/-'pi, an old locative suffix which still appears in certain postpositions. It is replaceable by modern suffixes: neʔ mosa'ŋnevʔ 'I am at Mishongnovi'.

8. Various pronouns Interrogatives (including interrog. adverbs, which are case-forms of pronouns): hak (hakiʔ, hakʔi) nom. 'who', (obj. haki), hakim 'who pl.', haqam (ha'qamʔb) loc. 'where', haqʔmi all. 'to whom, whither', haqaq abl. 'whence', hin 'how' and nom. 'what', hi'ta nom. and obj. 'what', hinok 'why', hime 'what' (not knowing whether inanimate or animate), obj. himey, hisa 'how many', hisaʔ or hisaq 'how much', hisat 'when', hi'savbʔ 'until when, how long', and many others built on the same bases. They are both interrogatives and indefinites, e.g., hak 'somebody', haqam 'somewhere', hi'ta 'something', hime 'something of unknown nature'; and in Hopi thought there is no line between interrogation and indefiniteness (which to a Hopi implies a question, to the indefinite nature) -- every 'something' is an 'I wonder what?'

Negatives prefix qa- to indefinites: qaha'qam 'nowhere', qahi''ta 'nothing'.

Individuatives suffix -wa, obj. and oblique -wat to other pronouns after their case-suffix: ʔi'wa, obj. ʔitwat 'this one', haqʔmiwat 'to which one'.

Others: təm nom. only, hortative 'we', e.g., təm ni'mani 'let's go home'; mi obj. mit 'that' emphatic, hi'sahqam 'as many as', soz, soso- sosok, so'soyəm 'all', sh 'only' (enclitic) and many more.

Verbal pronoun

kʷ, and > -N before in the general sense yaŋ 'this, here', something' or 'what' -səna 'do' occur so'. These bases directly to them, along there', etc (itive), giving verb and whating. The feel, touch, sense

9. Numerals Ca

na'18ʔ, 5 ci'votl 11 paŋ't se'ka, 1 commoner medial 1

The bases for de: civo't-, nava'y- adjectival and 1

or above 4 -siki with 10 form the

and/or ordinals: time, caŋ'ʔsik counts: payis ta man' would be us

of context requi thus for 'on the three days, they

Verbal pronouns: The bases pa'n-, ya'n-, hi'n- (-n > -N before k, q, k', and > -N before other stops) may be prenexed to any verb modifying it in the general senses: pan 'that, so there' (cf. pan 'like that' III 2), yan 'this, here', hina 'something, what? how?', e.g., hi'navqta 'he hears something' or 'what does he hear?' The verb stems -qawe 'say', -caki, -cama 'do' occur only postnexed to these pronouns, e.g., pa'Nqawe 'he says so'. These bases are so verb-like that some verb suffixes may be added directly to them, e.g., -ma progressional aspect, giving panma 'he goes along there', etc. The commonest such use is with -ti (durative intransitive), giving verbs that might be rendered as to be thatting, thissing, and whattling. Their use is most idiomatic; thus panTi often means 'act, feel, touch, sense', and hiNTi often 'what ails ...?'

9. Numerals Cardinals in pausal form: 1 se'ka, 2 l8'ye'8, 3 pa'hiw8, 4 na'l8', 5 ei'vot8, 6 na'vayl, 7 ca'ns'8, 8 na'nall, 9 pa've'8, 10 pak'te, 11 pak't se'ka, 20 l8'v pak'te or sq'nate, 30 payiv pak'te, etc. The much commoner medial forms drop final -u, -?u, -?, and for 9 contract to pvv. The bases for derivation and compounding are se-, l8'-, payi-, na'l8-, civo't-, nava'y-, cans'?- nana'l-, pvv'?, pak't'?. There are special adjectival and pronominal forms for 2, 3, 4. Multiplicatives suffix -y, or above 4 -sikly, to base: l8'v 'double', nana'lsikly 'eightfold'. These with 10 form the higher numbers, decimal system being used. Repetitives and/or ordinals change -y of multiplicative to -s: l8's 'twice, second time', cans'?'siks '7 times'. These, not cardinals, are used in time counts: payis ta'la '3 day(s)'. In use as ordinals, payis ta'qa '3 times man' would be used to indicate the third or the fourth man, as the pattern of context required. Hopi frequently counts only the superseded units; thus for 'on the fourth day they held the ceremony' it might say 'it being three days, they held the ceremony'.

more than,  
-than-me is  
?a'nswa'ri  
tive is ex-  
  
opi place  
ars in cer-  
mosa'nevt?  
  
rbs, which  
bj. haki},  
to whom,  
a nom. and  
nimate or  
h', hisat  
on the same  
k 'somebody',  
wn nature';  
indefinite-  
ure) -- every  
  
hi''ta  
  
ronouns af-  
wat 'to  
  
let's go  
ios, soso-

#### IV. Verbs

1. In general The simplex is the bare lexical stem upon which no grammatical operations have been performed. It is in eventive or transitive voice, punctual or durative aspect, present-past tense, third person, singular unless a suppletive plural, indicative mode. If it cannot be analyzed as a compound or derivative it is a root. Most roots have the form bubu. A root can often be further analyzed as an interplay of phonetic symbolisms. A base is a form obtained by removing suffixes, not necessarily all suffixes; conversely, a form to which certain suffixes may be added. Theme is synonymous with base, its only advantage being the convenient adjective thematic, e.g., a thematic suffix or process: one which yields not a finished word but a base ready for suffixation. Most of the forms of any one verb derive ultimately from a single base, the normal base; in Classes 2 and 6 the simplex, in other classes formed by a thematic process. Another base is the tensive base, formed by a thematic process, and several other bases require special names as much-used centric forms. The infinitive (IV 7,8) is a base capable of use as an open prenex, usually coinciding with some other base, depending on verb class. The types of suffixes in regular order of superimposition starting from the simplex-base are: thematic (if any), voice, aspect, number, tense, mode. This order is subject to a few qualifications of a self-evident sort, e.g., a certain aspect-form of a transitive voice might be treated as a base and secondarily passivized, in which case the passive voice suffix would come after the aspect suffix. Stem is a general term that includes root, base, and word, the last considered as 'starting-point of a paradigm' -- a definition of 'stem'.

2. Verb classes Hopi verbs fall into seven classes or conjugations, which differ on certain points of thematic technique. They also differ in

'creativity' or Cl. 1, which is to specialize in a curious department to some one class added so far as (2) class-property may belong at once class (2). Thus pe'yaknani. At the suffix -k- and the peya Cl. 1 'it is class, except that manner required by made. All suffixes which are 4, -la

Class 1 Simplex b<sup>2</sup> if a stop is 'tensive base usual ending in a. Simple final reduplication large class, the semantic field of having characteristic Its roots are mou have a formulaic

'creativity' or ability to yield all forms, i.e., all the forms of Cl. 1, which is the maximal conjugation. Moreover, certain classes seem to specialize in certain fields of thought; altogether these classes show a curious departmentalizing of the vocabulary. Each suffix also belongs to some one class, and so may change the class of the form to which it is added so far as concerns (1) adding of further suffixes, but not as regards (2) class-properties inseparable from the original simplex. Hence a form may belong at once to two classes, its outer class (1 above) and its inner class (2). Thus pe'yakna 'he lays it open (as one opens a book or a fruit)' has received the transitive suffix -na Cl. 2, therefore being of outer Class 2 it can receive the future-tense suffix -ni without alteration: pe'yaknani. At the same time it is in inner class 1, witness the thematic suffix -k- and the vivid concrete meaning, both pertaining to the root peya Cl. 1 'it is laid open, etc.' Unqualified, 'class' will mean inner class, except that 'addition according to class' means of course in the manner required by the outer class of the base to which the addition is made. All suffixes are Cl. 2 except -ke, -y<sup>h</sup>va, -wisa, -n<sup>h</sup>ua, -lawe, which are 4, -la (6), -<sup>n</sup>we (mixed 2 and 7), and the mode suffixes (7).

Class 1 Simplex a root bub<sup>2</sup>u<sup>2</sup> (with rare exceptions), u non-long, b<sup>2</sup> if a stop is 'b' (rare exceptions). Normal base bub<sup>2</sup>u<sup>2</sup>-ke / bub<sup>2</sup>u<sup>2</sup>-k-, transitive base usually bubub<sup>2</sup>-, also bub<sup>2</sup>-, also bu-'b<sup>2</sup>a'-a- from a simplex ending in a. Simplex is eventive and punctual. The only class having final reduplication, the segmentative aspects, and inner plural. Very large class, the most fertile and creative in Hopi. It preempts the semantic field of form-transformations and deformations and movements having characteristic form or outline, like whirl, zigzag, oscillate. Its roots are moulded by phonetic symbolism and their elements (II 2) have a formulaic intra-radical significance (VII). Examples are ?ewi

'blazes up', cala 'flies to pieces', laŋa 'is pulled', nöLö 'curves around', roya 'rotates', wari 'one runs', yŋma 'one goes out'. Class 1A, sisi'wga 'urinates' and a few others, change -ga to -kək- for normal base.

Class 2 represents the process of adding suffixes to a form without other operation upon it. Simplex may be either root or derivative; naturally it contains an enormous number of derivative bases, many of them petrified into simplexes, making it a very large class. Normal base is the simplex. Simplex is of diverse forms, may have consonant-clusters, may end in suffixes (e.g., -ta, -na) that define the voice or aspect and can be replaced (rather than added to) by other such suffixes. Simplex often transitive and durative. Tensive base as in Cl. 1, or same as normal base. Infinitive by thematic -n, or by dropping petrified suffix of simplex. Preempts the field of abstract ideas, denominative verbs, causatives. Examples: pe'ta 'closes it', qate'vte 'one sits down', nima 'goes home', te'viŋtā 'asks him', wa'yma 'walks'. Cl. 2A haŋ'wa 'digs it', mə'a 'stings, pins, shoots it', pö'a 'wins it', sowa 'eats it up', pre-aspirate like Cl. 5 but stress and otherwise behave as Cl. 2.

Class 3 Like Cl. 2 but simplex a root of form bu'ba, normal base bu'ba'-, infinitive bu'ba'-n or bub, tensive base same or bubub<sup>2</sup>-; a small class of common words, e.g., ni'na 'kills one', pe'na 'writes it', wa'ya 'one flees', we'wa 'thinks'; pa'ta 'melts it' is peculiar in being a pseudo-root, -ta behaving (e.g., pluralizing) like a transitive suffix, the real root being pa'- 'water'.

Class 4 Normal base and infinitive by contraction (II 2) of simplex, tensive base as in Class 1, form of simplex diverse, either root or derivative. Large class, rather uncreative, older stratum of language, deals largely in acts of everyday life and states of the human organism. Examples: hi'ko 'drinks it', mo'ki 'one dies', navq'ta 'one hears it', nö'sa

'one eats', pe'wi

Class 5 Simplex bubu'-, -y'- become suffixes beginning irregular. When Cl. 2. Small class stratum of Hopi. gives one', pa'ki 'cuts it', təwa

Class 6 Simplex same, infinitive direct from root cöpa'la 'lifts it'

Class 7 represents not a formal verb copulative pause. copulative reversal for singular subject aspect, both number -ya need not receive (goes to) my house (pa'w-n'ni) 'he who becomes -ni'- becomes ki'mi-ni'qa and suffixes can be etc., to regular of adjectives, or pay (paye', -y'e')

'one eats', pe'wi 'one sleeps', soma 'ties it'.

Class 5 Simplex a root of form bubu, normal base and infinitive bubu'-, -y'- becomes -u'- before w, y and 'b. Normal base pre-aspirates suffixes beginning in -ga, durative -ta / -ti, and -pe, -pi. Tensive base irregular. When reduplicated or with prefix or close prenex changes to Cl. 2. Small class, but some of the commonest verbs, petrified, oldest stratum of Hopi. Examples: hōta 'opens it', qate 'one sits', maqa 'one gives one', paki 'one enters', piṭe 'one arrives', tavi 'puts one', take 'outs it', tawa 'one sees it', wəne 'one stands'.

Class 6 Simplex of form bubula (-la a petrified suffix), normal base same, infinitive bubul, tensive base bubula-n- or irreg., makes some forms direct from root bubu-; small class, examples: cova'la 'gathers it', ōpa'la 'lifts it', pe'ya'la 'floats in air', wi'silā 'are lined along'.

Class 7 represents the process of conjugating as a verb a word that is not a formal verb; by a subnexed auxiliary. Its simplex is a word used in copulative pause. To inflect such a 'nominal sentence' like any verb, the copulative reverts to its medial form and receives the subnex -ni- (Cl. 5) for singular subject, -ya (Cl. 2) for pl. subj., -man-, for continuative aspect, both numbers; after which any desired suffix is added, except that -ya need not receive a suffix. Thus pəm ʔikiy ʔəvʔe (ʔawʔi) 'he is at (goes to) my house', with the future suffix -ni gives pəm ʔikiy ʔəv-ni (ʔa'w-ni) 'he will be at (will go to) my house'. The auxiliary -ni- becomes -ni'- before 'b, and the base retains its own high stress (e.g., ki'mi-ni''qa) unless of one syllable (e.g., ʔaw-ni''qa). Most voice suffixes can be added directly to Cl. 7 stems because they change nouns, etc., to regular verbs in Cl. 2 or 4. This large class preempts the field of adjectives, of space-relational ideas, and of relative motion. Examples: pay (payeʔ, -yʔe) 'is on the way, goes', ʔa'piy (ʔa''piyəʔ, -yʔə) 'goes

away', lolma 'is fine, pretty' (attributive loma'), pala 'is red', pe·he 'is new', we·yok (we·yo'qa, -qa?à) 'is large'. Cl. 7A words, though uniformals, contract like Cl. 4 before the subnex; include ta·la 'shines', ca·yo 'is small', qö·màvi 'is black'.

Examples of addition of the agentive suffix -qa 'he who ...' in each class: 1 roya > ro'yàqqa, 1A sisi'wqa > sisi'wkèqqa, 2 ?e''ta > ?e''tàqa, 2A mə?a > mə?'à'qa, 3 pe·na > pe·'na'qa, 4 soma > soMqa, 5 təke > teke''qa, 6 cova'la > cova'laqà, 7 ?a'ply > ?a''ply-ni''qa, 7A ta·la > tal-ni''qa.

3. Voices These are: pure voices; 1 eventive, 2 transitive, 3 reflexive, 4, passive, 5 semi-passive, voices tinged with aspect; 6 resultative, 7 tensive-passive, 8 cessative, 9 possessive.

1. Eventive The intransitive active-stative voice, the voice of the simplex in Cl. 1 and 7, often in other classes. Its distinctive meaning should not be analogized with the ordinary intransitive of e.g., English. It announces the manifestation of an event or phenomenon, but 'phenomenon' is not to be construed as action, nor the subject as actor. The subject is the field or substance, animate or inanimate, in which the phenomenon manifests. The eventive does not distinguish between conceptualizations of the event as activity and as produced effect, but can imply both. Thus it does not distinguish action from its ensuing result, but displays as a whole some manifestation more or less in flux, or often instantaneous and therefore already accomplished, or accomplished in essence if not wholly terminated. Thus yema 'he performs going-out', means 'he goes out', 'there he goes out', or 'he's out (having just gotten outside)'. It must be realized that Hopi tense does not distinguish between present and past. The nature of the phenomenon adumbrated by the stem together with context makes the meaning clear. If the stem denotes

a motional phenomenon  
'gives a start or  
English active voice  
force in inert subject  
may require transitive  
tension' means for  
'it gives (or receives)  
through', sa'pe 'is  
i.e., 'is tipped  
out (subj. the coefficient)  
attributively, especially  
down te''pèla (cl. 7)

2. Transitive  
voice in Cl. 2, 3  
the suffix -na (or  
also by changing  
made on the normal  
la'naklnta 'is put  
to sleep', Cl. 7  
durative transitive  
'is turning it' =  
the root: nö'lö'la  
interplay of objects  
together' or 'he  
should be 'goes  
'he crossed the  
need of an object  
tives, stating a  
e.g., nö·sa 'eat

a motional phenomenon, e.g., roya 'makes a turn or rotation', tere 'gives a start or quiver', there is little difficulty in translating as English active voice. If the event be rather of change or change-inducing force in inert substance, the lack of any similar intransitive in English may require translation as a passive, e.g., laŋa 'it comes under a pulling tension' means for us 'it is pulled' or 'it is stretched'. Thus waya 'it gives (or receives) a sway', poro 'receives a perforation, is drilled through', sa'pe 'crumbles down, is crushed down', waha 'receives a spill', i.e., 'is tipped and emptied (subj. a container)' or, 'is spilled, poured out (subj. the contents)'. In Cl. 1 the eventive simplex may be used attributively, especially in close compounds, e.g., sape'tpēla 'crumpled-down te''pēla (cliff)'.  
 2. Transitive This voice needs no explanation. It is often the simplex-voice in Cl. 2, 3, 4, 5, 6. Transitivity in the first 6 classes is by the suffix -na (or -nta durative), in Cl. 7 by -ta on the noun-like base; also by changing intransitive -ta to -tōyna. The ordinary transitive is made on the normal base, e.g., Cl. 1 la'ŋākna 'gives it a pull, pulls it', la'ŋākinta 'is pulling it' (-ke + -nta > -kinta), Cl. 4 pewna 'puts him to sleep', Cl. 7 pe'hetā 'renews it', Cl. 7A caŋta 'reduces it'. Some durative transitives are made on the tensive base, e.g., Cl. 1 ro'ya'nta 'is turning it' = ro'ya'-n-nta. Some transitives are made by -la on the root: ŋōlō'la 6 'bends it' < ŋōlō 1. Some Cl. 1 eventives denoting interplay of objects may be used as transitives: ʔqno 'they (two) bump together' or 'he bumps it'. The usual translation of yema, 'goes outside', should be 'goes beyond', whence yema may mean 'crosses it'; pōhet yema 'he crossed the road'. A transitive implies third-person object without need of an objective pronoun. A few transitives may be used as inobjectives, stating a transitive-like action without referring to any object, e.g., nō'sa 'eats'. Transitives with incorporated object, e.g.,

ciro'ninà 'bird-kills' are inobjective. Inobjectives can be made by prenexing hi'n- 'something' (III 8).

3. Reflexive Made from transitive by prefix na'-, e.g., na'lànakna 'pulls himself', natke 2 'cuts himself' < təke 1 (IV 2 Cl. 5, I 5). The prefix is really the pronominal base na'-, and when the object-relation would be of oblique case in Hopi one uses such case-forms, e.g., na'mi 'to himself'; the locative with a passive form denotes self-agency; na'v ʔe''cɪlɪti 'it (was) closed by (in) itself'.

4. Passive By suffix -lɪti, iotizing a, e before it, except for: (a) Cl. 5 kʷese, mąqa, təwa do not iotize, (b) rare slight irregularities, e.g., Cl. 2A sowa > sowa'lɪti, (c) Cl. 6 by -la > -lɪti, (d) transitivizing -ta, -nta, > -ti, -Nti. Thus la'naknɪlɪti 1 'is pulled', la'nakɪNti 'is being pulled', te''pəɪlɪti 'is roasted', pə''nɪ'lɪti 3 'is written', so'mɪlɪti 4 'is tied', həci'lɪti 5 'is opened', cova'lɪti 6 'is gathered'. Passives like eventives do not distinguish between performance and completion of act. Root-passives are occasional forms made directly from an eventive root, to which they add merely the idea of external agency; in Cl. 1 they take the Cl. 2 pattern without iotizing: ho''təlɪti 'is straightened' < ho'ta 'gets straight'.

5. Semi-passive A form possible with many transitive roots in -a, -e, simply by iotizing, e.g., təki 'is cut'. It is closer to an eventive in idea than the true passive, and is conjugated in Cl. 1, if at all. It is also used as a noun; təki 'a cut'. A similar noun is made from the Cl. 1 normal base (in -ke): wə'həki 'spillage'.

6. Resultative Changes -lɪti of passive to -wta, except for: (a) no exceptions to iotization, (b) pass. -ti > -iwta or -tiwta or -Nti > -niwta, (c) in Cl. 1 by adding -iwta to normal base rather than from transitive, also Cl. 1 has root-resultatives like root-passives, (d) in Cl. 7

by changing trans duration, and sho or static, which the beginning of English form: is the run', so'miwt ca'y'lwta 'is nov -ta is an importe

7. Tensive-pas shortened vowel l limited. Means t is tensive, thou on the subject f from successive 'is talked about drunk up' (hi'ko

8. Cessative tion of inceptiv ...-ed'. The pr basically a punc becomes point-li the past. Suffi that a few irreg bases show iotiz yohy- < yo'hi < yo'hywiwa '... s red.'

9. Possessive

by changing trans. -ta to -?iwa. This voice is tensive, implies time-duration, and shows the subject abiding in that condition, whether active or static, which the eventive and transitive produce, i.e., it cuts out the beginning of the eventive and prolongs the end. It resembles the English form: is ablaze, whirl, astride, etc. Thus wa'rikiwa 'is on the run', so'miwa 'is in a tied state', cova'wta 'is in a bunch', ca'y'lwta 'is now reduced'. The resultative base in -iw- after dropping -ta is an important base.

7. Tensive-passive Suffixes -iwa to a tensive base, re-lengthening shortened vowel in base to its simplex length. Occurrence somewhat limited. Means that the outside agency exerted on the passive subject is tensive, though the effect may not be, as when the influence converges on the subject from all around, or from different people, or accumulates from successive acts, etc. Thus lava'yta 2 'speaks of it' > lava'yiwa 'is talked about' (by people), ke'yi'am hi'k'wiwa 'their water is being drunk up' (hi'ko 4, tensive base same as normal base, hik'-).

8. Cessative A curious form resulting from applying a fused combination of inceptive and tensive-passive suffixes; it means 'stops being ...-ed'. The principle seems to be that the so-called inceptive is basically a punctualizer, and says that the extended passive influence becomes point-like, hence ceases to extend or continue, vanishes into the past. Suffixes -viwa to the infinitive or to the Cl.7 base, except that a few irreg. Cl. 1 forms suffix -v?lti to the root. Contracted bases show iotization where this is visible in contraction (e.g., yohy- < yo'hi < yo'ha) (II2). Thus lana'kviwa 'stops being pulled', yo'hyviwa '... smashed', so'mviwa '... tied', pala'viwa 'stops being red.'

9. Possessive Suffix -?yta. Has two forms: the basic possessive

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adds the suffix to an eventive, passive, adjective, or noun; means that the subject possesses the thing, quality, or condition denoted by the base. It is tensive and on a verb base denotes a more intrinsic quality than the resultative. Chiefly used with nouns, and formed by changing the -y of the reaffirmative to -?yta: ki' ?yta 'has a house', civot siwa'mè?yta 'has five young sisters', ?aw ?enə'n" à?yta 'loves him', lit. 'has heart to him'. It resembles our -ed participle in, e.g., 'he is long-legged', Hopi wepa' hokà?yta. The transitive possessive adds -?yta to a transitive, iotized where possible, and means 'has it ...-ed', e.g., tavi' ?yta 'has it placed' < təvi 5 'puts it'. It may be equivalent to a perfect or pluperfect: qawa'yoy so'mi' ?yta 'he had his horse tied' or 'he had already tied his horse'. The possessive base in -?y-, formed by dropping -ta, is an important base.

4. Aspects First set: (1) punctual, (2) durative and/or simple, (3) segmentative, (4) punctual-segmentative, second set: (5) inceptive, (6) progressive, (7) spatial, third set: (8) projective, (9) continuative. Suffixes are superimposed only on those of a preceding set.

1. Punctual The aspect of the simplex in Cl. 1 and often in other classes. It denotes a single display of the phenomenon, including the immediate effects, at a point of space and time. It can denote the outburst of an impulse that may or may not be prolonged, e.g., wari 'runs, goes into a run', or it can denote one pulse of a process that if continued would be repetitive, oscillatory, or cyclic, e.g., tere 'makes one start or tremor', roya 'makes one turn', yo'ko 'gives one nod', sila 'gives one clink of metal'.

2. Durative and/or simple Sometimes the aspect of the simplex, especially in Cl. 2, 4, and frequent as a derived aspect. It shows a phenomenon in the midst of continuance, e.g., hi'ko 4 'drinks it' or 'is drinking

it'. Sometimes sense may be we of a true punctual hi'ko may be ce initial reduplic base, which is c base is added -i the simplex, unl the form ends in an actual -nta punctual transit change to -kinta aspect. Any ba relative tensiv except that for tensive base, i the subnex -manta frequent irregu wa?ə 1 'tips ov > əɬta or cə'' pe'na 3 > pənta təke 5 > tə'tki ?a'w-manta.

3. Segmenta fix -ta; a kind the single puls series of simil

it'. Sometimes completion of the act may be implied and the durative sense may be weak, nevertheless there is not the one-pulse definiteness of a true punctual. This 'weak tensive' phase of the durative (e.g., hi.ko) may be called the 'simple' aspect. The tensivity is increased by initial reduplication. The durative is made secondarily from the tensive base, which is often<sup>a</sup> reduplicated form, giving strong tensivity. To this base is added -ta, e.g., so'sòmta 'is tying it', and the voice is that of the simplex, unless the base is one ending in thematic -n-, in which case the form ends in -nta and is transitive, and a base in -n- answering to an actual -nta transitive is usable as a transitive base. In Cl. 1 the punctual transitives in -kna and inner-plural -mna are made durative by change to -knta, -mnta. The transitivizing -ta of Cl. 7 is of simple aspect. Any base yielded by dropping -ta, -ti of a durative form is the relative tensive base of that form. The durative base changes -ta to -ti except that for a form in -nta it is usually identical with the relative tensive base, i.e., in -n-. In Cl. 7 special duratives may be formed with the subnex -manta. The following examples of durativizing reflect the frequent irregularity of the tensive base, properly a lexicon entry:

wa'ò 1 'tips over' > wawa'òktà, qòhi 1 'breaks' > qò'qhita, còlò 1 'drips' > còlta or cò''còlta, re'pi 1 'flashes' > revta, ʔe''ta 2 > ʔe''tanta, pe'na 3 > panta, we'wa 3 > we''wa'nta, na'ha 4 'unties it' > na'nahta, tqke 5 > tq'tkita, cova'la 6 > cova'lanta, ʔaw (ʔawiʔ, -ʔi) 7, > ʔa'w-manta.

3. Segmentative Cl. 1 only, by final reduplication of root and suffix -ta; a kind of durative. Transitive by -ta > -tòyna. Means that the single pulse of the punctual is regularly repeated in a continuing series of similar events, e.g., tere'retà 'sembles, i: quivering',

roya'yatà 'is turning round and round', sila'latà 'jingles', repi'pità 'sparkes', waya'yatà 'is swaying to and fro, shaking', waya'yatdyna 'shakes it'; nōna 'several go out' yields the graphic nōna'natà 'issues in continual throngs', hence 'gushes' -- said of a fountain. When the phenomenon is not naturally vibrative, the meaning is often repetition along a line in space, e.g., cami 'is split inward from the edge' > cami'mità 'is fringed along the edge'. The corresponding durative base in -ti- is the segmentative base, while dropping -ta leaves the segmental base, sometimes used as a noun: cami'mi 'fringe', sila'la 'jingler'.

4. Punctual-Segmentative Cl. 1 only, suffixes -yke, or -ykina for transitive, to the segmental base. While the segmentative shows a segmental phenomenon in the midst of continuance, this aspect says merely that such a phenomenon supervenes upon a period devoid of it. Thus when the wind rises the windmill roya'yayke 'turns'; the chief, seeing the people assembled, ?amə'mi ye?a'a'yayke 'talked to them' (< ye?a 'speaks').

5. Inceptive Suffixes -va to a durative base (including segmentative base and normal bases that are durative); means that a durative phenomenon is in its initial stage. Thus coco'?tivà 1 'begins jumping' (co'o 'jumps'), wi'la'nva 1 'begins to wave' (wila 'gives a wave'), wila'lativa 1 'begins waving, fluttering', la'naklnva 1 'begins to pull it', pewva 4 'goes to sleep', so'somtiva 4 'begins to tie it'. Nevertheless, not every English 'begins to' expression can be rendered by the inceptive. The Hopi future tense can have the sense 'begins to do it' and that is often the correct form. In other cases the following aspects are correct:

Eng. 'begins to x or be x-ed', i.e., starts transition which will progress to a state x.

'begins to x it', transitive of above

'begins to x', involving starting into motion, x mainly a motional act.

Hopi progressional resultative ('crescentive') in -wma, -iwma (IV 4, 6)

progressional transitive-possessive in -?yma, -i?yma (IV 4, 6)

projective in -to (IV 4, 8)

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## 6. Progressi

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## 7. Spatial

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Outer classes 5 and 7 avoid inceptives, preferring future tense.

6. Progressional Suffixes -ma to any sort of base, or to a transitive, according to meaning desired. Basically, it shows the phenomenon included within a linear motion of the subject. This results in the following main types: (a) On a punctual eventive base with inanimate subject it makes the phenomenon move quickly along the direction indicated by its nature, e.g., ?e'wikmà 'goes up in a burst of flame'. (b) As above with animate subject, or on a punctual transitive, means 'while going along has done it', often rendered 'has been to do it', e.g., ro'yakmà 'wheels in mid-career', la'naknàma 'has been to pull it', hi'wma 'has been to drink (it)', teke'ma 'has been to cut it'. (c) On a tensive or durative base means 'going along doing so', e.g., ?ewi'witima 'flames run along', ye?a'atima 'goes along talking', mema'matima 'rolls along' (mema 1 'rolls over'), te'tkitima 'goes along cutting it'. (d) On a resultative base has a 'crescentive' meaning as above (IV 4, 5), e.g., we'haklwma 'begins to get spilled (advances into a spilled state)', ro'yaklwma 'begins to turn', ca'y'wma 7A 'begins to get small', and a similar meaning on (e) a basic possessive base; but (f) on a transitive-possessive base has a transitive crescentive force (IV 4, 5), and also that of 'has got it almost x-ed': wa'okni'yma 'begins tipping it over' or 'has it almost tipped over', so'mi'yma 'begins to get it tied, has it almost tied'. (g) If addition of linear motion to the base idea suggests a natural phenomenon, this meaning supersedes others: pe'ya'la 6 'floats in air' > pe'ya'w- result. base > pe'ya'wma 'flies along, flies'. Some defective verbs start from progressional as their simplex: wa'yma 'walks', yawma 'one carries one' (but not nima, weni'ma et al.).

7. Spatial Replaces progressional -ma by -nema; means that the phenomenon is moving in a free range of two or three dimensions. This sense is

often rendered by 'around, about', e.g., pe'ya'wnemà 'is flying about', la'nakinnema 'is pulling it around'. Also equivalent to a second durativizing of the progressional or projective, e.g., if wa'yma is 'walks', wa'ynemà will be 'is walking' or 'is taking a walk', indicating the possible tour of an area. The defective hg'v- 'looks for it' is used mainly in spatial: hg'vnema 'seeks it'. Neither -ma, nema, or -to are creative in outer Cl. 7; this class is first transformed by making a voice-derivative (IV 2, Cl. 7) -- cf., however, petrifications from Cl. 7 roots: ?a'?nema 'goes fast', hi'hinmà 'goes slow'.

8. Projective: Suffixes -to similarly to -ma, but usually to the normal base; means that the subject as bearer of the developing phenomenon is projected in forward motion. With transitives the translation is usually 'goes (went) to do it', e.g., ni'na'to 3 'goes to kill it', hstà'to 5 'goes to open it'. With eventives we get images of the root-event achieved in or by a forward motion: co'?oktò 'jumps off', pqsto 'starts to fall' (pqsi 4 'one falls'), pità'to 'is just arriving, coming in (e.g., a train), ya'maktôy 'out he goes!', wa'ynemto 'goes for a walk'. Some defectives start from projective, e.g., maqto 'goes hunting, hunts'.

9. Continuative By -lawe on tensive or segmental base or on spatial, and -lawe may always replace -ta and shares its causative function in Cl. 7; in outer Cl. 7 uses the auxiliary -man-. Means that the action continues over considerable time or distance; when applied to a -ma or -to form this is first changed to -nema. Thus roya'yalawe 'keeps turning', la'nakinlawe 'keeps pulling it', we'wa'nawe 'keeps thinking', so'somlawe 'continues trying it', wa'ynemlawe 'keeps walking', ?a'piy-manlawe 'keeps on going away'. In Cl. 6 the root may be used as base: cova'lanlawe or cova'lawe 'keeps gathering it'. The defective ta'wawe 'is singing, sings', is used mainly in this aspect, and stems <sup>from</sup>

ta'wi 'song', t

5. Number Verbs dual a singular regular plural ?e'taya, somya is used, but if except as base ma'mantò 'they group pluralize the suppletive

Suffix-plura and mode suffix except when the and possessives -to > -wisa, -l

Suppletives in the root, e. pe'wi 4 'sleep' pl. so'a 4; qst maqqa 5 'give', pl. ?aki 5, taw

Object plura 'drops them'. but occur as ro pl. pi'na 3; pe ?qya 5; yawma 2 camya (\*ca'ma 4) ject is not exp

ta'wi 'song', ta'wi 4 'is sung', ta'wilti same.

5. Number Verbs inflect for singular and plural number of subject. For dual a singular verb is used with a dual noun or plural pronoun. The regular plural in Classes 1-6 suffixes -ya according to class: ro'yakya, ?e'taya, sonya, teke'ya, etc. In Cl. 7, auxiliary -ya, instead of -ni is used, but if the Cl. 7 base be already plural in form -ya is not needed except as base for another suffix, e.g., ?a'piy-ya 'they go away', but ma'maNtə 'they are girls', ma'maNt-yaqam 'those who are girls'. A limited group pluralizes by reduplication; lexically these may be grouped with the suppletive plurals.

Suffix-plurals Certain suffixes when final or followed only by tense and mode suffixes pluralize by changing to a plural form: -ta > -tota except when the meaning is of abiding state including all resultatives and possessives, and then -ta > -ya<sup>wa</sup>, -ti > -toti, -lti > -ltoti,<sup>-ma</sup> and -to > -wisa, -lawe > -lawa.

Suppletives In many verbs the meaning of subject-number is inherent in the root, e.g., wari 1 'run', pl. ye'te 1; yama 1 'go out', pl. nəna 1; pe'wi 4 'sleep', pl. to'ka 4; pəsi 4 'fall', pl. löhö 1; mo'ki 4 'die', pl. so?a 4; qəte 5 'sit', pl. ye'se 4; wəne 5 'stand', pl. ho'ni 4; məqa 5 'give', pl. heyta 2; pəki 5 'enter', pl. yeja 4; pite 5 'arrive', pl. ?əki 5, təwa 5, see pl. tətwa 2; and many others.

Object plurals Transitivity of löhö 'they fall' yields löhökna 'drops them'. Verbs singular or plural as to object not only result thus but occur as roots, e.g., ni'na 3 'kill (one)', pl. qəya 2; yo'ha 3 'smash', pl. pi'na 3; pəna 5 'put in', pl. ta'na'ta 2; təvi 5 'put, place, transfer', <sup>p</sup>?əya 5; yawma 2 'one carries, takes one', kima 5 'one carries several', camya (\*ca'ma 4) 'several carry'. Aside from such words plurality of object is not expressed as such, but it may change the verb form by making

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it tensive, e.g., pemey na'ha is 'he unties them', if he unties them by unfastening one knot, but if he has to undo knot after knot the action is durative, pemey na'nahta, and if he has to walk along to untie them, pemey na'nahma.

Inner plural Cl. 1 only, by using thematic -m- in place of -k-, with stress before it; means that the phenomenon manifests in multiple form. This often implies plurality of object, thus la'nakna 'he gives it a pull', yields lana'mna 'he gives them a pull', e.g., several strings held in the hand. Obviously with many phenomena such plurality is rather a multiplicity of effect, e.g., po'rakna 'makes a hole through it', poro'mna 'perforates it with holes'; na'lakna 'puts a coil in it', nalomna 'puts coils in it'. Answering to the simplex lana is a special form lana'Mti 'they are pulled'. Combination of inner and root plurals with aspects is often most expressive: a tornado wa'omimma 'goes along tumbling them over', a sower laho'hotdynama 'goes along dropping them in repeated showers'.

6. Tenses The Hopi tenses are (1) factual or present-past, hereafter called past, (2) future, (3) generalized. Past and future are merely convenient tags; the real meaning of these tenses is as follows:

1. Past tense This tense takes in the whole realm of accomplished fact, that which is already history. Hopi does not distinguish between the already-accomplished present (which is simply a very recent past) and a past that is more remote. It can place events relatively within this time-region, but does so by modes and particles, not tenses. Hereafter the English past will be used to translate the Hopi past. The past is the tense of the simplex and of narration.

2. Future tense This tense takes in the whole realm of the not-yet-accomplished. It includes what is predicted, predetermined, potential, contingent, intended, willed, desired, and what is incipient but not

thoroughly manifested. It includes the use of the future participle, 'will', and 'going to'. In narration, or by a character, it may be referred to as 'would'. Suffixes: 'e'tani, we'w

3. Generalized This tense is in its class. It is used under assumed conditions. I drink coffee' lana 'pulls it', we' It takes the agentive form (teke'ne-niq, superimposable

7. The Modes are (1) indicative, (2) conjunctive, (3-7) conjunctive, (6) subjunctive, (10) dependent, called 'dependent' of address-form

1. Indicative use as in English. It depends to the English 'it is a dependent' the question 'what'

2. Disjunctive

thoroughly manifested as a complete fact. This last explains the frequent use of the future as an inceptive. The commonest translations are 'shall', 'will', and 'going to'. Sometimes means 'intends to', 'wants to'. In past narration, or by complex sentences, the latency expressed by this tense may be referred to the past, so that we translate 'began to', 'was about to', 'would'. Suffixes -ni (-ni in Cl. 3), -ni- to the past: wa'rikni 'will run', ʔe'tani, we'wa'ni, somni, teke'ni, cova'lani, ʔa'piy-nini.

3. Generalized tense Suffixes -ŋe (-ŋʷe) to any final according to its class. It declares a general truth; that which is customary or regular under assumed conditions, e.g., tala'vay neʔ kohst hik'ŋe 'in the morning I drink coffee'. Thus la'nakŋe 'is (always) pulled', la'naknaniŋe '(always) pulls it', we'wa'ŋe, somŋe, teke'ŋe, cova'laniŋe, ʔa'piy-niŋe, etc. It takes the agentive suffix as Cl. 2 (teke'ŋ'əqa) but most others as Cl. 7 (teke'ŋe-niq, etc.). It is equivalent to a usitative aspect, but is superimposable upon aspects, and patterns as a tense.

7. The Modes and their Syntax The modes are (1) indicative, (2) disjunctive, (3-7) conjunctive set, viz. (3) conditional, (4) correlative, (5) concursive, (6) sequential, (7) agentive; quasi-modes (8) infinitive, (9) patientive, (10) instrumental. The disjunctive and conjunctive set are called 'dependent modes'. The imperative, hortative, etc. form the class of address-forms, not modes.

1. Indicative The mode of the simplex and the independent sentence; use as in English except in this respect: the sentence po'ko wari corresponds to the English 'the dog runs', but it is also equivalent to the English 'it is a dog running'; i.e., this is the ordinary form of reply to the question 'what is that thing?'

2. Disjunctive and conjunctive The technique of complex sentences has

reached a high development in Hopi, practically superseding compound sentences and loose connection of clauses. Precise syntactic relations, like those of case in pronouns, must connect the different verbs, and are expressed inflectively. The whole system rests on a fundamental distinction between the 'conjunctive' type of clause-connection in which the same subject acts throughout (e.g., 'if I come I will stay'), and the 'disjunctive' type in which one subject's act is in relation with another's ('if I come he will stay'). In the conjunctive type an 'intimate relation' between the acts of the same subject is expressed in terms of the five conjunctive modes, supplemented by word-order and/or conjunctions. In the disjunctive type the disjunctive mode only (or in a few special forms the agentive) is used, but follows the pattern, word-order, and conjunctions of the corresponding conjunctive form. In the conjunctive the subject usually is mentioned only once, before both verbs. In both types the main verb is indicative, except where we have clause linking to clause in continued sequence. Hopi does not always agree with English as to which is the 'main' or indicative verb.

Disjunctive mode suffixes to the indicative according to class the tri-formal -q (-q<sup>ò</sup>?, -q<sup>ò</sup>?). The use of the 2nd and 3rd forms is not the usual one of pause-technique (except that 3rd form is always used for the exclamative); it is that the 3rd form follows a high-stressed vowel. In Cl. 7 the medial form is almost exclusive, even in pause. Class forms: royaq (< royak-q)/ro'yaqq<sup>ò</sup>, ʔe'taq/ʔe''taq<sup>ò</sup>, we.waq/we'wa'q<sup>ò</sup>, soMk/soMq<sup>ò</sup>, pit<sup>ə</sup>'k (tav<sup>ı</sup>'q)/pit<sup>ə</sup>'k<sup>ò</sup> (tav<sup>ı</sup>'q<sup>ò</sup>), cova'laq /cova'laq<sup>ò</sup>, ʔa''piy-nıq.

A disjunctive clause is handled either (a '1st disjunctive') as if it were in nominative case modifying the main clause, or (b '2nd disjunctive') as if in objective case, a sort of object of the main clause. The case-distinction is expressed by the subject's being in objective case in (b), and the types fall together if 3rd pers. pron. subj. be omitted. The

particular uses are somewhat like oblique case system.

### 3. Conditional

normal base of the vowel (if any) of the cova'ls?, ʔa''piy-nıq accent is not shifted at times used, depending on the material needed to materialize, i.e., in future or particles of uncertainty. I go home I (always) home I will see a mountain' is was going home I saw a mountain' is was going home I saw a mountain' is sumptive particle k<sup>ə</sup>R ʔ<sup>ò</sup>k<sup>ə</sup>'ʔ s<sup>ə</sup>n t<sup>ə</sup>' ʔ<sup>ə</sup>s (IV 9): neʔ ʔ<sup>ə</sup> seen it'. s<sup>ə</sup>'on q<sup>ə</sup> conclusion from an implied negative conclusion: gone home I would disjunctive: (k<sup>ə</sup>R) go home my father s<sup>ə</sup>'on q<sup>ə</sup> ʔita'mey have greeted us'.

Use of the conditional fulfilling a certain

particular uses are treated along with the conjunctives, which appear somewhat like oblique cases, though not belonging to the ordinary oblique-case system.

3. Conditional Adds -s? (-sʔ), and in a restricted list -aʔ) to the normal base of the outer class to which it is added, eliding the final vowel (if any) of the base: ro'yakʔ, ?e'tsʔ, we'wʔ, somsʔ, tekʔ, cova'lsʔ, ?a''piy-nʔ (pl. ?a''piy-yʔ). In the pausal form for Cl. 5, accent is not shifted. In the medial of Cl. 1, 2, 4, final high stress is at times used, depending on sentence-rhythm. This mode tells the condition needed to materialize some event stated in the main clause as non-factual, i.e., in future or generalized tense; and is translated 'when ...', or with particles of uncertainty 'if ...'. Thus: neʔ nimsʔ te'kʔit tewʔni 'when I go home I (always) see a mountain', neʔ nimsʔ te'kʔit tewʔni 'when I go home I will see a mountain'. Here a word of caution: 'when I went home I saw a mountain' is sequential mode (IV 7, 6), not conditional, and 'when I was going home I saw a mountain' is concursive (IV 7, 5). With the presumptive particle kʔR: kʔR neʔ nimsʔ tewʔni 'if I go home I shall see it', kʔR ?ʔkʔʔ sʔn tʔ'twʔni 'if they arrive they may see it'. With impotential ?ʔs (IV 9): neʔ ?ʔs nimsʔ sʔʔon qʔ tewʔni 'if I had gone home I would have seen it'. sʔʔon qʔ 'must, should' is required in drawing a positive conclusion from an impotential (contrary-to-fact) condition, and sʔʔon in a negative conclusion therefrom: neʔ ?ʔs nimsʔ sʔʔon tewʔni 'even if I had gone home I would not have seen it'. The corresponding disjunctive is 2nd disjunctive: (kʔR) ney nimaq ?ina ney ?ʔqa'laʔni (?ʔqa'laʔni) 'when (if) I go home my father greets (will greet) me'; ?ita'mey ?ʔs ninmaq ?ita'nam sʔʔon qʔ ?ita'mey ?ʔqa'layʔni 'if we (pl.) had gone home our fathers would have greeted us'.

Use of the conditional in emphatic-pausal denotes 'by' or 'through' fulfilling a certain condition as means: neʔ pʔt te'kʔit tewʔni ni'maʔ

'I will see that mountain by going home'; lɛlɛ'qan'ɛy ni'na'n'e mɛ'ʔa'ɛ  
'he always kills a snake by shooting it'.

4. Correlative Adds to indicative according to class -qaY (-qa'ɛ), which has a special form -qayɛ. The word-final combination -qaY (so written on theoretical grounds) is a peculiar sound occurring nowhere else in the language, and could be denoted as [qaɸ] where ɸ is a voiceless velarized g with hoarse laryngeal construction suggesting Arabic h. In -qa'ɛ also is something of the same quality. In adding the suffix to a durative in -ta (segmentatives and simplexes in -ta excepted) it may replace -ta. This mode denotes a 'condition precedent' to the event of the main clause, or the main clause is a corollary to the modal clause. Corresponding is 1st disj., except as noted below. The commonest of the conjunctive modes; may be rendered by 'since, as, because, that, having ...-ed', but its uses are quite exact and specific; I shall attempt a rough outline:

a. 'since, inasmuch as': panis hi'ta ye'ykəqaY qahi'sat ʔna'y ʔamem pasmi? 'since he was forever (panis) making something, he at no time (went) with his father to the field'. In disj.: hi'ta yeykek na'ʔat pasmi? 'since he was making something, his father went to the field'.

b. 'and' implying causality or connected action, i.e., the mode means 'did it and ...': mo'kpevitəy wiqqaY te'ʔoymlə pemey cəka 'he brought the two corpses and put them up (cəka) into a corn-stack'. An 'inceptor' (IV 9) often takes the place of English 'and'.

c. explaining or stating a reason, often with main clause introduced by ʔo'viy 'therefore': ma'na yo'ha'qaY ʔo'viy pa'c'lawe 'the girl broke it; that is why she was crying'. This is the commonest expression of unemphatic 'because', cause being stated first. In disj. ma'na yo'ha'q ʔo'viy ye'ʔat ʔici've'lwta 'the girl broke it and therefore her mother resulted angry' (resultative of ʔici've 7 adj. 'angry').

d. 'because', in emphatic pausal form: ne' wari ce'at tewa''qə'ɛ

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'I ran because

e. adverb

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f. 'that'

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conjunctive use th

(IV 7, 11).

g. This m

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objective agre

'I ran because I saw a rattlesnake'. In disj.: ne? wari ce?a ney tewa'q?e  
'I ran because the rattlesnake saw me'.

e. adverbial use of a verb stem, modifying another verb to describe a complex action or delineate the path of a motion: wa'riqqay soh'vit ngya. 'by running he rounded the tree', i.e., 'he ran around the tree'. Some of these usages shade into postpositions (cf. III 6).

f. 'that', indirect discourse (usually with subject repeated): ne? paw pa'ngawe ne? pav-ni''qaY 'I told him that I had been there'. In disjunctive use the types of indirect report clause become more varied, see (IV 7, 11).

g. This mode, generally in its special form -qayz, may be used like the objective case of a verbal noun with postpositions. Some of these are regular postpositions, e.g., ?an, ?anta 'like', or ?qv which is used for 'where' and 'when'; others are special postverbals', e.g., sav, ?asav, pasav (?a'sa'vo?, etc.) 'in the interim preceding ...', 'until', 'before'. Some of these last are themselves irregular correlative verbs and so may be used after indicatives, but are more common after a -qayz form. Thus: co'cdni ?o'miq-ninjqays pa'sa'vo? 'he will smoke until he (goes) upstairs' (?o'miq 7 relational 'into above', both vbs. future), ne? qatq'vte ta'vot tewa''qayz ?qv?e 'I sat down where I saw the rabbit', hisat ?em tewa? -- pite''qayz ?qv?e 'when did you see it? -- when (on) arriving' (I saw it', understood). Such a postposition may be used copulatively and then assume the role of main verb, e.g., na'y pa'a'n<sup>?anta</sup>anjqays 'it was like he was about to help his father', i.e., 'it looked as though he would help his father'.

The corresponding disjunctive uses 2nd disj. mode with true postverbals like pa'sa'vo?, but objective case of the agentive mode with regular postpositions. The subject in the latter case may be either nominative, or objective agreeing with the agentive: ne? wene ?ayam ?em ce'at tewa''qat

ʔəvʔe 'I stood yonder where you (nom.) saw the rattler', wa·y<sup>a</sup>ma ʔayqʔ  
ʔoʔowāt lō'hōqqāt ʔaṅa 'he walked yonder (tensive) where (ʔaṅa, tensive)  
 the rocks (obj.) had fallen'.

h. The future correlative is used much like the English infinitive, especially to express purpose: yasva pə·naʔyanīqaʔe 'they sat down in order to write'. With ʔo·viy it yields constructions like neʔ ʔikiy ʔaw piteʔniqāy ʔo·viy me·nat yaʔmākni 'for me to arrive at (to) my house I must cross the river' -- or, 'that I may arrive etc.'. In disjunctive the first usage takes either 1st or 2nd future disj., but the ʔo·viy form seems to treat ʔo·viy as a postposition, and uses future agentive as above (e.). Future agentive is also used in disj. purpose clauses that might be considered direct objects of the main verb, e.g., 'I desired that he should come here' neʔ pə·w-ninīqat naʔwākna.

5. Concursive Adds to indicative according to class, or direct to the tensive, resultative, or possessive base, the suffix -kaṅ (y before it > u) with long-duration form -kakaṅ; means that the event is coincident or concurrent in time with that of the main clause. It is usually rendered 'while, as, and': neʔ pənkaṅ yeʔaʔatā 'as I wrote (dur.) I talked (segm.)', weniʔmalāwkaṅ taʔwlāwe 'he was dancing and singing'. May be used like Eng. participle in -ing, as adj., adv., or postp., e.g., ʔah nima siʔspalat kimaʔkaṅ 'he came (ʔah) home carrying (or, with) the peaches'. Corresponding is 2nd disj. with a temporal word, e.g., naʔt 'while': naʔt maʔmaNtēy hoŋk taʔtaqt taʔwlāwa 'while the girls stood the men sang'. The future concursive means 'before', with or without pas pay (= 'just then'): neʔ waʔriknikaṅ naʔsennāwe 'while about to run I rest', i.e., 'before I run I rest'.

6. Sequential Adds -t (-tā) according to class. The medial form takes final accent, not only in Cl. 3, 5, but before enclitic pəʔ 'and', often in the form -kt, and sometimes elsewhere because of sentence rhythm. Means

that the event occ  
 does not imply nec  
 ...', etc. The id  
 verb in future, or  
 run, ʔason neʔ ʔaʔ  
ʔewiʔkt pəʔ toʔki  
2nd disj. with ʔas  
 I ran my friend w

7. Agentive Ac  
 base (tensive, re  
 verbal noun and ce  
 a relative clause  
 formed on the dur  
 'writer', but pə·  
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Relative-nomin  
 away', sinom yaṅ  
 out', tiyo ʔəv-ni

Relative objec  
 saw me', neʔ tewa

Disjunctive re  
 in relation to)  
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wiʔwəbrot ma·na l  
 The English 'subj  
 of a transitive v  
 having tied, it t  
 the correlative,

that the event occurs as a second event following that of the main clause; does not imply necessitous connection, rendered 'after', 'did it and then ...', etc. The idea of 'after' is intensified by the conj. ʔason, by main verb in future, or both. Thus neʔ coʔʔɔkni waʔriktà 'I will jump after I run, ʔason neʔ ʔaʔpiy-nɪt ʔah piʔte 'after I went away I returned', qɔʔhi ʔewiʔkt pɔʔ toʔki 'the fire flared and went out'. Corresponding is the 2nd disj. with ʔason, pɔʔ, etc.: ʔason ney wariq ʔikʔaʔci coʔʔɔkni 'after I run my friend will jump'.

7. Agentive Adds to indicative according to class, or to any typical base (tensive, resultative, etc.) the suffix -qa; the form is a nominative verbal noun and can take noun inflections. This mode turns the verb into a relative clause, and may also be used as a noun of office, especially if formed on the durative indicative (compound suffix -taga), e.g., pɔʔnɪtaga 'writer', but pɔʔnaqa 'he who wrote it'. The form pluralizes in Cl. B 1 observing necessary conditions of plurality in the base, e.g., masaʔytaga 'wing-possessor, aviator', pl. masaʔyyɔŋqam.

Relative-nominative: maʔna ney tewaʔqa waʔya 'the girl who saw me ran away', sɪnom yan yɔsqam nɪna 'the people who sat here (yan, tensive) went out', tiyo ʔɔv-niʔqa pɔwʔi 'the boy who was there is coming'.

Relative objective: neʔ tɔwa maʔnat ney tewaʔqat 'I saw the girl who saw me', neʔ tɔwa taʔtaqtɔy yeʔteqqɔmey 'I saw the men who ran'.

Disjunctive relative: Sentences like 'the one whom (something else is in relation to)' are treated as first disjunctive thus: wiʔkpaŋʔat ʔem somk tɔki 'the rope that you tied broke (lit. 'cut', semi-pass. of tɔke)', wiʔwkɔrot maʔna lɔhɔknaq piʔni 'the bottles the girl dropped shattered'. The English 'subject' is in objective case because it is treated as object of a transitive verb; the first example is equivalent to 'the rope-obj. you having tied, it broke', and differs only by order from the disjunctive of the correlative, ʔem wiʔkpaŋʔat somk tɔki 'through your tying the rope,

it broke'. Relative object of a postposition is usually parallel to the above: cqmot ?an wa'ymaq we'pa 'the hill that he is walking on is high', cqmot ?an pa'm-niq we'pa 'the hill that he is on is high'; ki'het ?aw ye'takyaq (pe'ma-yaq) we'yo'qa 'the <sup>house</sup> that they ran to (went to) is large'; ?it ?ak ne? lewi'taq pam?i 'this that I painted it with (?ak) is it' = 'this is what I painted it with'. Also the English 'subject' may be in nominative, the postposition containing its own object, e.g., pam ma'na tiyo ?anem mi'man'è-niq pam?i 'that girl, the boy generally going home with her, is she' = 'that is the girl that the boy goes home with'.

The agentive is used like the English -ing adjective without implying time-coincidence, but implying the 'intimate relation' (IV 7, 2), compare the concursive k'a'he pe'ya'wmakar tš'təqləwe 'the flying eagle kept screaming', the agentive in təwa k'a'het pe'ya'wmaqat 'he saw the flying eagle', and finally the disjunctive which breaks the 'intimate relation' between 'eagle' and 'flying': təwa k'a'het pe'ya'wmaqə? 'he saw the eagle fly' or 'that the eagle was flying' (IV 7, 12). The future agentive is also a potential noun-adjective, e.g., wa'rikniqa 'he as running, he as a possible runner': ne? wa'rikniqat na'wəkna 'I want him as running, want him to run' (IV 7, 4 h). For special uses see IV 7, 4 g, h.

Agentive passive Used thus: ?i? yəv tavi'Ltiqa 'this is what was put here', po'təyla ce'ce'təy cova'Ltiqəmey 'he counted the rattlesnakes that had been collected'-- i.e., as a relative, not as a result-adjective.

Agentive resultative Used as noun-adjective of result, the commonest equivalent of our passive participle, with ending -wtəqa, pl. -wəwəqam: so'miwtəqa 'tied, in tied condition', teki'wtəqa 'cut'.

8. Infinitive A verb base employable as an open prenex with verbs of trying, learning, being able, ceasing, etc. In Cl. 1, 5 it is the normal base, with final accent, in 2, 3, 4 usually the tensive base, in Cl. 6 a contracted base in -l (-l before surd); in Cl. 7 the form disappears as

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Thus ne? wari'k t  
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it', etc. Future  
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9. Patientive  
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way, less common  
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noun taking noun  
both it and agent  
ne? qəhi'kpet na'

10. Instrument  
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noun: pe'vəwəpi

11. Disjunctiv  
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such, becoming the ordinary noun, etc., underlying the Cl. 7 conjugation. Thus ne? wari'k tewl?yva 'I learned to run', lana'miN ∴. 'to pull them (dur.)', so'M ∴. 'to tie it', teke' ∴. 'to cut it', cova'L ∴. 'to gather it', etc. Future correlative may be used for the same purpose, and is the proper form when 'to do' means 'in order to do'.

9. Patientive Form A: by -pe on normal or tensive base showing iotization where not masked by contraction; meaning like the agentive resultative: lana'kpe 'pulled', yohype 'smashed'. Form B: by -ve in the same way, less common and used where tensivity is implied, e.g., on inner-plural base: poro'mve 'pierced with holes'. The patientive is an adjective-noun taking noun inflections Cl. A (plural by redupl. or -ve or both); both it and agentive resultative may be used with a future sense, e.g., ne? qahi'kpet na'wakna 'I want it broken'.

10. Instrumentive Iotizes patientive to -pi but is not a real mode; it is a freely derivable noun denoting the restricted place of action, often equivalent to its instrument: wari'kpi 'running-place', yama'kpi 'bridge', ?e?e'cpi 'door', peve'wpi 'sleeping-place, bed'. It is a Cl. A noun: pe'vva'wpi 'beds'.

11. Disjunctive report-clauses Clauses reporting or inquiring about a fact are extensions of the correlative pattern, and either verb may be put into (first) disjunctive, with a subtle difference in meaning; as in (a) ne? navq'tk ?eme ('by my hearing it, it thundered') 'I heard it thunder', or 'that it thundered', and in (b) ne? navq'ta ?e'meqqo? or ne? ?emek navq'ta ('I heard it by its thundering'), same translation as (a); both report sensory impressions but the reported fact is somewhat more vivid when in the indicative as in (a). Every type of report has a specified pattern; thus for a visual impression (a) is used: ne? tewa'q ta'la 'I saw that it was bright'. For a conceptualized impression, presumptive keR is added to type (a): ne? tewa'q keR pe'he 'I saw that (evidently) it

was new' -- newness being not a direct sensory image but a concept. For hearing a verbal report type (a) is used with kəR to imply that the report is true and yaw (quotative particle, II 5) if report is not vouched for. For indirect discourse (a) or (b) may be used, with or without kəR or yaw: pəNqaWk yaw ma'na pəki 'he said that the girl entered'. For inquiries and indirect questions (b) is used with sən 'whether' or an interrogative word: ʔaw yqri sən we'ti lo'lma-niq 'he looked (to see) if the woman were pretty', te'vintà hak ki'y ʔa'sonve-niq 'he asked who was inside his house'. For seeing someone perform an action 2nd disj. (b) pausal is used: neʔ təwa wa'riqqəʔ 'I saw him run'.

12. Coupling and Contrasting In place of our 'ands', 'buts', and other loose connectives Hopi requires that connected clauses comply with the precise syntactic system outlined above. This done, various particles may be used to stress contrast or other relations outside the system (IV 9), e.g., pay 'but'. If we wish to say 'he tumbled down but stood up again', obviously the prior act must be in sequential mode: mene'kt pay ʔahoy wene'v-te. If the sentence is 'he was walking fast but was tired', concursive must be used: ʔaʔneʔ wa'yamakəŋ pay ma'ne'ʔi. Verbs parallel-related to a third are simply juxtaposed: qahi''ta ni'neʔ ʔo''k'a'ytəŋ'e qaha'hla'y-n'e 'when he kills nothing he is sad and unhappy'. The handling of dependent clauses which are themselves complex is shown by: neʔ weni'makəŋ ta'wlaŋ'e ha'hla'yŋ'e 'when I dance and sing I am happy', neʔ wari'kt monq'rc' ma'ne'ʔyŋ'e 'when I run and then swim I am tired'. In narrative, Hopi often links one modal clause after another into long sentences whose many fine nuances of expressed relationship go but awkwardly in English.

14. Modal conjunctions The conjunctions niq, neʔ, ni'qaY, nikaŋ, niŋ, and the rarer yaq, etc., all loosely rendered 'and', are the modes of the Cl. 7 auxiliaries used without any base, serving to introduce a clause or sentence in such a way as to relate whatever has gone before in the sense

of ~~the~~ ~~is~~ ~~in~~ ~~the~~ ~~sense~~

of putting it in the same mode of pause than is yielded somewhat to the subject in number correctly conjunctions, and no'vatə't ʔa'w-ni hiŋ siwa'mat naw food they were-also hunting, and-in-so how his sisters he

8. Address-forms

(the uses already restrain from active. The imperative but a Cl. 1 simple the normal base in of an imperative Transitive verbs the nominative ob imperative is the active: ʔem ʔita'm command is couple you see it, shoot you run!' The im with qa, yielding shows that the fo

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kəR or yāw:  
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(IV 9), e.g.,  
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of putting it in that particular mode. The preceding clause may have been in the same mode or in the indicative. These words give more feeling of pause than is yielded by the smooth linkage of the simple modes, and correspond somewhat to our comma and semicolon pauses. They need not agree with the subject in number, whence the ya-forms are uncommon, but they must be correctly conjunctive or disjunctive. They are often followed by other conjunctions, and much used in narrative, e.g., nīq ?ason yaw ma'navit no'vatə't ?a'w-nīni nīq tiyo se'zlhəqam piw maqto ni'qaY qə navə'ti'ytə hīn siwa'mat nawī'ni'ytəq 'and-so then after the-two-girls had prepared-food they were-about-to-go-there, and-so the boy sometime-early also went-hunting, and-in-so-doing (ni'qaY) had-no-knowledge (not had it known) of how his sisters had-it-all-planned'.

8. Address-forms This classification divides verb-forms into annunciative (the uses already considered) and injunctives (forms used to incite to or restrain from action), viz., imperative, semi-imperative, vetative, hortative. The imperative is formed by pause-technique as explained in II 5, but a Cl. 1 simplex does not form its imperative directly but makes it on the normal base in -ke: wa'rike?ə 'run', cf. so'ma?ə 'tie it'. The object of an imperative is in nominative case: pəm po'ko so'ma?əy 'tie that dog!' Transitive verbs may express imperative without pause-technique by putting the nominative object after the verb: soma po'ko 'tie the dog'. The semi-imperative is the future tense with 2nd person subject used like an imperative: ?em ?ita'məm-nīni 'you (come) with us'. It is required when the command is coupled to a dependent clause, e.g., ?em tewə' mə'?əni 'when you see it, shoot', kəR ney la'gəknaq ?ema ye''təkni 'if I pull it, all of you run!' The imperative cannot be negatived, but the semi-imperative can, with qə, yielding the vetative, in which 'you' need not be expressed (qə shows that the form is not a true future): pe'kot qə somai 'don't tie the

dog'. Hortative is expressed by the future, using in 1st pers. pl. the hortative 'we'; təm wa·'ywišni 'let's walk'; otherwise the sentence-introducer nam or pay nam: nam pə'w-yəni 'let them come here'.

9. Non-actual forms Negative: in past annunciative and in vetative by qà 'not' immediately before verb or before the word specifically negated. This qà may also be used as a negative and privative prefix qa-. In future annunciative by sq'on 'not' somewhat freely placed before verb: ye?at qà pite''qaY ?o'viy sq'on ?aw yq'rkni 'his mother did not arrive and therefore will not see him'. The double negative sq'on qà is a positive necessitative, 'must, should'. Interrogative: by an interrogative pronoun or adverb, or by sentence-introducer pə: pə ?əm (qà) təwa 'did (didn't) you see it?' No rising inflection or other special pause form. Dubitative: by sgn 'may, might, perhaps, whether', sgn pi 'or', sgn ... sgn pi 'either ... or', ks conjectural 'might', ks qà provisional 'not', taq or taq ks 'lest', kəR 'presumptively, supposing, if, that', kəR qà 'if not, unless', yəw quotative, et al. Potential: by the negative form kəRhi'n qà 'can', kəRhi'n 'cannot'. Add ?əs or ks to mean 'could'. Also by the verb təwi'əyta 'can, knows how' with infinitive or correlative. Necessitative: by sq'on qà (see above) or ?əs pay. Necessitative, potential, and most dubitative meanings except kəR, yaw, need future tense. Impotential: Hopi often uses a particle ?əs placed near the beginning of the sentence or clause, meaning that the subject might have manifested the phenomenon under somewhat different conditions, and that an animate subject attempts to manifest it, or manifests it 'and yet ...', implying a certain uselessness. In past indicative a common translation is 'tried to', in future indic. 'is trying to' or 'would', in dependent modes it imparts a 'subjunctive' flavor (for use in conditions, IV 7, 3), but it is always very idiomatic, as also the similar particles pəs, pəs pay, et al.

The above particle which Hopi is extrastylistic in use. types of clauses, inceptors.

10. Inceptors Ho modalizers, or adverbial meaning, but which that the hearer's e.g., pay 'now, and then', ?anca 'oh', etc. The modal class.

V. Invariants T and verbs, to which and postpositions in another sense. numerals, verbs (of adverbs and copula). An important class take the place of relative bases ?a-, p of duration, e.g. vo?, hi'savb?, hi exact meaning of system of grading are expressed, then after, when, whi

The above particles represent a class of adverbs called modalizers, in which Hopi is extremely rich, that impart nuances and are idiomatic and stylistic in use. They are also conjunctions when they introduce specific types of clauses, and often likewise belong to the next-mentioned class of inceptors.

10. Inceptors Hopi makes much use of numerous particles, which may be modalizers, or adverbs with a definite meaning, or may have only a vague meaning, but which serve largely to introduce the sentence or clause so that the hearer's attention will be secured before the important words; e.g., pay 'now, already, but', yaw 'then', pe? 'and, then', pe'yaw, payyaw 'and then', ?anca 'so', ?o'viy 'therefore', teR calling attention, ?is 'oh', etc. The modal conjunctions (IV 7, 13) may be placed in the same class.

V. Invariants The main types of this class have been treated under nouns and verbs, to which their use is largely auxiliary. See nouns (case-forms and postpositions, each of which is in itself an invariant adverb, though in another sense part of a paradigm), pronouns (interrogatives, etc.), numerals, verbs (Cl. 7 relationals, modes and their syntax with instances of adverbs and conjunctions, non-actual forms, inceptors). Various adverbs: An important class is that of the adverbs of duration (durativeness) which take the place of our adverbs of time. They usually contain the demonstrative bases ?a-, pa-, hi- and the root sa, so, and express different degrees of duration, e.g., brief or local (pay, ?ason), slightly extended (?a'sa'-vo?, hi'savò?, hisat), extended (panis, ?a'nsàkis), long (?a'sàkis). The exact meaning of such forms cannot be given briefly, it depends first on a system of grading durativeness, and secondly on the mode relations; thus are expressed, though more precisely, the ideas of our words now, soon, after, when, while, during, until, as long as, often, as often as, every

time, always, etc. Other common adverbs are ʔaʔneʔ 'intense, fast, very', ʔahoy 'back, re-, again', hihin 'gently', naʔhoy 'apart, across', pavan 'with energy, hard', paʔs 'softly', piw 'also', stʔlaq 'already', sen 'uniform, at rest, still', qaʔvoʔ 'tomorrow', taʔvok 'yesterday'.

Interjections and stereotypes: ʔewiʔ 'yes', qəʔs 'no', taʔāy 'surely!', lolma 'hello', hih kʔakʔhat yeʔst ('what thanks all sit') = 'may I join you?' (said on entering a gathering), kʔakʔha, kʔakʔhāy 'thank you' (man speaking), ʔaʔskʔālgʔ same (woman speaking). The last pair reflects a stylistic difference found in some terms of the vocabulary that are used chiefly by men, others by women.

VI. Derivation 1. Verbs are derived from other verb stems almost wholly according to the regular processes of verb morphology already described, the making of the numerous aspect and voice forms. Shifts of meaning often turn upon a use of the reflexive-voice form. This form frequently yields nouns in which all reflexive meaning disappears, and the noun may then yield a denominative verb with a new meaning. Many verb<sup>s</sup> are now petrified in a derived form in -ta, -na, -ma, -lāwe, etc. Thus naʔwākna 2 'wants or likes it' is a transitive of a Cl. 1 root \*naʔwa, which is not found.

2. Verbs are derived from nouns and adjectives by causative -ta (or less often -na), causative-continuative -lāwe, possessive, -ʔyta (IV 3, 9); while the noun itself is used as a verb (Cl. 7) in a copulative or predicative sense.

3. Nouns are derived from verbs: (a) and chiefly, by the nominal modes; agentive, patientive, and instrumentive (q.v.). (b) By the semi-passive (iotized root) used as a noun: həci 'opening', qəʔhi 'fire, light' (qəʔha 'kindles it'). (c) By iotizing a close incorporation-form, e.g., \*ma-s(e)ma 'arm-bind' > masmi 'bracelet'. (d) By iotizing a reflexive,

e.g., na-ʔ(e)ʔta  
kiva for a ceremon  
base iotized, use  
waʔriki 'running'  
'fire, combustion  
noun in form of a  
(h) Some words are  
bright', taʔla 'l  
made with various

4. Adjectives  
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VII. Phonetic S  
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e.g., na-ʔ(e)ʔta 'shut self up' > naʔci 'standard to mark shutting of kiva for a ceremony'. (e) By the resultative base, or the Cl. 1 normal base iotized, used as an abstract or action noun: waʔrikiw (Cl. D) or waʔriki 'running'. (f) By suffix -ŋ (Cl. E): ʔewi 'it blazes' > ʔewin 'fire, combustion'. (g) By the inner-plural base of Cl. 1 used as a noun in form of a Cl. B 1 plural: porom 'perforatedness, group of holes'. (h) Some words are equally verb and noun, e.g., taʔla 7A 'shines, is bright', taʔla 'light, day'. (i) Derivations now petrified have been made with various suffixes, e.g., -hi, -la, -va, -vi, -ta, -wa.

4. Adjectives are formed from verbs by the nominal modes, or by using the infinitive (or sometimes in Cl. 1 the root with final accent) as an attributive. They are formed from nouns by using the noun prenex-form attributively, by the possessive agentive in -ʔytaqa 'possessing ...' and the suffix -ʔaway 'like, -ish'. There are many adjectives and adverbs formed from unisolated stems plus -q, -k (-qa), apparently contracted agentives.

5. Adverbs or rather adverbial use of noun and verbs stems can be obtained by use of annexation (compounding) technique, by use of the verb modes to qualify other verbs, and by use of the case forms or postpositions, e.g., for 'deeply' one may say 'in the depths'.

VII. Phonetic Symbolism and Root Structure Hepi is characterized by a great deal of consistent symbolic use of various sound-combinations and phonetic processes. By this I do not mean the simple type of onomatopoeia that uses more or less imitative sounds, but a more subtle, almost formulaic use of syllables and modulations that stand for certain broad types of meaning, in which no imitative reference can be discerned, but which nevertheless would seem to have had far-reaching psychological value, on the suggestive level apart from the actively functional one, to the com-

munities and culture whose use of this Uto-Aztecan dialect has moulded, worn, and rubbed it into its present shape. The most obvious trait of this quality is that changes in the basic lexical groundwork, the 'skeleton' of words, are practically always consistent with the resulting change in meaning. Thus, to take the most obvious case of all; reduplication always changes from punctual to tensive, and final reduplication always to the 'segmentative' type of meaning. Here, to be sure, is a somewhat imitative type of symbolism, but such imitativeness is almost confined to reduplication, and from there on we pass into a realm of more abstract and 'pure' symbolism. Thus the change from bu<sup>1</sup>bu<sup>2</sup> to bu<sup>1</sup>bu<sup>2</sup>?u<sup>2</sup> always yields an imperative, and to bubu always an exclamation. Here we may still detect or imagine a certain mimetic appropriateness in the greater force and weight added to the word-final, but it is very thin; the meanings depend on symbolic rather than mimetic values. Iotization always yields a passive or passive-noun type of meaning; here there is no obvious appropriateness. Final -a of verbs, whether in root or suffix, generally goes with a transitive or a motional meaning, excepting the resultative -wta and possessive -?yta. Terms denoting space-relationships between objects or points are always pluriformal, and their pausal endings, though historically often representing the original uncontracted stem, are now rather systematically symbolic. In the vowels of the pausal endings -u, -u?, -?u, i refers to punctual location (except in -yq < \*-ya), o to slightly tensive, a tensive or motional, -i 'to'. In the consonants of relational endings, there is persistent reference of y to location, m to plurality, tensive spread, and motional path, s to time and duration.

Systematic symbolism is not however confined to this kind of reference, but is quite as typical of the lexical meanings of roots. This is especially so with Class 1 verb roots -- which are prevailing phono-symbolic in type -- but all roots of form bubu, even nouns, show the characteristic

more or less. Here  
'element' of II 2,  
'empty' of symbol  
seem to be mere fo  
positions of the  
refers to large-s  
thrown out', waho  
watqa 2 pl. 'flee  
This broadly moti  
referring to quic  
legs in running,  
cere 1 'is stuck  
open', tere 1 'qu  
'rubs', re'k'a 1  
riya 1 'whirls'.  
of a phenomenon  
above joins -re  
pehi 1 'is spread  
pere 1 'bursts o  
ters, "popped"  
open', pe'ya 1 '  
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riya, roya, hoya  
taya 1 'shakes',  
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more or less. Here the symbolic element is the phonologic uncontracted 'element' of II 2, but we may distinguish such elements as 'full' or 'empty' of symbolic value, for some elements, e.g., qa, terminal -na, -ni, seem to be mere formal blanks, either in a certain position or in both positions of the bubu root. In wari 'run' both elements are 'full': wa- refers to large-scale movement, e.g., waʔ 1 'is thrown down', wahi 1 'is thrown out', waho 1 pl. 'are fallen down', wala 1 'makes a wave, slosh', watqa 2 pl. 'flee', waya 1 'sways', wa'ya 3 'flees', wa'y-(ma) 'walks'. This broadly motional wa- is joined in wari to the element -re (loc. -ri) referring to quick, distortional, or vibrative disturbance like that of the legs in running, cf. hare- 6 'bends it around', here 1 'is pressed upon', cere 1 'is stuck in', ciri 1 'sizzles', mere 1 'twists', pere 1 'bursts open', tere 1 'quivers', tori 1 'spirals around'; cf. re-, ri- in re'ke 1 'rubs', re'k'a 1 'slips', re'pa<sup>1</sup> 'slips off, separates', re'pi 1 'flashes', riya 1 'whirls'. We do not always get such a definite phonetic hieroglyph of a phenomenon as in wari, but we often do with Cl. 1 roots. Thus pere above joins -re and the element pe- of 'spreading open' significance, e.g., pehi 1 'is spread', pe'ci 4 'is flat', peya 1 'is broken into a gulch', pere 1 'bursts open, opens up', peri 1 'is burst open' with projecting tatters, "popped" (cf. pese 1 'drum is struck'), peya 1 'is spread or laid open', pe'ya 1 'spreads wings', 6 'floats in air, flies'. Here we note the -ya of decided, energetic motion seen also in waya, wa'ya, wa'y(ma), riya, roya, hoya 1 'fans', ḡaya 1 'shakes', ḡḡya 1 'circles around', taya 1 'shakes', ḡaya 1 'sifts through' and others. This systematic patterning of small elements lends vividness and an impression of harmonious design to the language, especially when these vivid, symbolic roots are elaborated in terms of the rich and flexible system of voices, aspects, and modes.