

MENOMINI

MORPHOPHONEMICS*

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1 The Menomini language is spoken by some 1700 people in Wisconsin; most, but not all, speak English as a first or second language; some, especially among the pagans, have also a speaking knowledge of Ojibwa or Potawatomi. Menomini texts will be found in Publications of the American Ethnological Society, volume 12 (New York, 1928). Menomini belongs to the widespread Algonquian family of languages; see Michelson in the 28th Annual Report of the American Bureau of Ethnology (Washington, 1912).

2 Analysis of Menomini speech-forms by formal-semantic resemblances yields a fairly clean division of forms into phrases, compound words, and simple words. The words in a phrase and the members in a compound word differ but little in different combinations; such variations as occur, constitute the *external* or *syntactic* sandhi of the language and will not be discussed in this paper. Simple words and the members of compounds, in turn, resolve themselves, under analysis, into morphologic elements which vary greatly in different combinations; the present paper describes these variations, the *internal sandhi* or *morphophonemics* of the language.

3 It is necessary to distinguish these morphophonemic alternations from certain others, which we may call *morpholexical* variations. In Menomini, as in other Algonquian languages, different words often contain morphological elements of otherwise identical meaning but differing somewhat in form. Thus, the word *tahkikamiw* *it is cold water* contains a suffix *-kamy-* *water, liquid*, but this form of the suffix occurs only in a few words; the freely

usable form of the suffix is *-ākamy-*, which may, of course, be described as consisting of *-kamy-* and a presuffixal element *-ā-*: *menwākamiw* *it is good liquid*, *apīsākamiw* *it is black liquid*, *maskāwākamiw* *it is strong liquid*, and so on. These morpholexical variations are quite distinct from internal sandhi; we shall deal with them only to the extent that they appear in the necessary preliminary survey of morphology, §§ 6 to 9.

4 The process of description leads us to set up each morphological element in a theoretical *basic* form, and then to state the deviations from this basic form which appear when the element is combined with other elements. If one starts with the basic forms and applies our statements (§§ 10 and following) in the order in which we give them, one will arrive finally at the forms of words as they are actually spoken. Our basic forms are not ancient forms, say of the Proto-Algonquian parent language, and our statements of internal sandhi are not historical but descriptive, and appear in a purely *descriptive order*. However, our basic forms do bear some resemblance to those which would be set up for a description of Proto-Algonquian, some of our statements of alternation (namely, those in §§ 10 to 18) resemble those which would appear in a description of Proto-Algonquian, and the rest (§§ 19 and following), as to content and order, approximate the historical development from Proto-Algonquian to present day Menomini.

In our theoretical forms we shall separate morphologic constituents by hyphens. The symbol ~ means "is replaced in alternation by." The colon (:) means "appearing in the actual Menomini word"; the word cited after

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the colon will generally involve alternations which have not yet been stated at the time of citation, but a reader who has gone through all of our statements will be able, returning to the citation, to account for all of these features.

5 The morphophonemes in our basic forms are:

Syllabics (short and long vowels)		front	back
higher		e ē	o u ō
lower		ə ε ē	a ā
Non-Syllabics			
semivowels	y w		
consonants	p t k č s h ʔ m n N		

In actual speech, ə is replaced by e, § 36, and N by n, § 13. On the other hand, the alternations result in two additional phonemes i and ī §§ 20, 35 and a semi-phoneme ū, § 35. The morphophoneme u seems to occur in only one suffix, -uw- forming transitive verbs, as pītuwew *he brings it to him*; in the actual language, u arises also by the alternation of §35. Hence the actual Menomini phonemes are

Syllabics (short and long vowels)		front	back
high		i ī	u (ū)
mid		e ē	o ō
low		ε ē	a ā
Non-Syllabics			
semivowels	y w		
consonants	p t k č s h ʔ m n		

The *clusters* in our basic forms are

č	before	p, k	-
s	before	p, t, k	
ʔ	before	p, t, k, č, s, n	
h	before	p, t, k, č, s, n	
n	before	p, t, k, č, s	

In the actual language, the basic clusters of n plus consonant are replaced by those with h plus consonant, § 23. In the basic forms, any consonant or cluster may be followed by one or two semivowels; in the actual language such combinations are greatly restricted by § 16 and § 20.¹

¹A few phonetic indications, while not strictly relevant, may be of interest. The high vowels, i, ī, u, ū, are much as in French *mis, mise, doux, blouse*;

6 The morphologic features of Algonquian appear in three layers: inflection, secondary derivation, and primary formation. All three consist chiefly in the use of suffixes. Processes other than suffixation demand some preliminary comment (§§ 7 to 9).

7 In inflection, suffixes are added to stems of nouns, verbs, and a few particles. Four prefixes are used in inflection: *ke-* *thou*, *Ne-* *I*, *we* *he*, and, occurring only in some dependent nouns (§ 9), *mε-* *indefinite personal possessor*: *kenēh* *thy hand or arm*, *kenēhkenawan* *our (inclusive) hands*, *kenēhkwawan* *your hands*, *nenēh* *my hand*, *nenēhkenawan* *our (exclusive) hands*, *onēh* *his hand* (§ 17), *onēhkwawan* *their hands*, *menēh* *someone's hand*, *a hand*. Before a vowel, the prefixes (in their basic form, hence by morpholexical variation, §3), add t: *ōs* *canoe*, *ketōs* *thy canoe*, *otōnowaw* *their canoe*, and so on.

There are certain irregularities of prefixation, of which we shall mention only one: before dependent noun stems (§ 9) in ē- and ō-, the prefixes drop their vowel: *kēyaw* *thy body*, *nēyaw* *my body*, *wēyaw* *his body*, *kōhneʔ* *thy*

the long mid vowels ē, ō much as in German *weh, wo*; the short mid vowels e, o somewhat as in English *pit, put*, but ow is somewhat as in English *sowing*; ε, ē are even lower than the vowels of American English *bed, bad*; short a ranges from German *hat* to English *hut*; ā from French *pâte* to English *saw*. The semivowels y, w are as in English, but after a non-syllabic, yā, wā are falling diphthongs: *payyāt* *when he came*, *kwāhnew* *he jumps* are phonetically [payi:at, ku:ahnew]. Of the consonants, only m, n are voiced; ʔ is a well-marked glottal stop, often with vocalic echo; p, t, k, č, s are lenes with slow opening. Non-syllabics are often strongly palatalized or labiovelarized by the preceding vowel, initial non-syllabics by the following vowel: *mīp* *early in the morning* (both consonants palatalized); *mwāk* *loon* (both consonants labiovelarized); *nekīʔs* *my son* (palatal k); *okīʔsan* *his son* (labiovelar k). In word, compound, or close-knit phrase, a long vowel in the next-to-last syllable and a long vowel followed in the next syllable by a short vowel, have a strong stress accent: *pakāmew* *he struck him* (stress on -kā-); *pemātesew* *he lives* (stress on -mā-). This seems to be the only actualized difference between ow and ōw: *nēmowak* *they dance* (stress on nē-), *manētōwak* *game animals* (stress on -tō-). Successions of syllables that do not contain such an accent, are varied by less stable ups and downs of stress: *peʔtenamoken* *it is said that they touched it by error* will be stressed on the first and third, or on the second and fourth syllables, or in other ways.

father, nōhne[?] my father, w-ōhn-: ōhnan his father (§ 17), cf. owōhnmaw the father, a father.

8 Certain inflectional forms of verbs have *initial change*: the first vowel of the stem is altered as follows:

a, e ~ ē: a[?]tew *it is in place, ē[?]tek that which is in place; kemew-: kemēwah if it rains, kēmew-: kēmewah when it rained; wēn-et-: onēt it is pretty, wēn-et-k-: wēneh that which is pretty.*

o ~ ō: koskōset *if he wakes up, kōskoset when he woke up.*

y- prefixes a: yāčhtok *if he renews it, ayāčhtok when he renewed it.*

Stems beginning with consonant plus y or w prefix ay to the y or w: pyāt *if he comes, payyāt when he came; kwāhnet if he jumps, kaywāhnet when he jumped.*

Otherwise, long vowel prefixes ay: wāpamak *if I look at him, wayāpamak when I looked at him; āčemit if he narrates, ayāčemit when he narrated; pōne[?]tat if he ceases, payōne[?]tat when he ceased.*

There are some irregularities, which we shall not here describe.

9 Features of inflection are in some cases retained in secondary derivation. Apart from this, secondary derivation consists in the addition of suffixes to the stems of nouns or verbs, as enēniw *man, enēniwew he is a man, manly.*

In primary formation suffixes are added to a root: root mat- *bad, suffix -a[?]nemw- dog: matā[?]nem nasty cur.*

Throughout the morphology, zero suffixes must sometimes be set up. It is a striking feature of Algonquian that in certain cases we must set up the root of a word as zero. In a few verb forms the stem is replaced by zero; thus, the stem en- *say so to* is replaced by zero before the inflectional suffix -ək-: enēw *he says so to him, ekwāh the other one says so to him, netēkwah he says so to me.* A large class of noun stems and certain particles contain no root and occur only with the prefixes of § 7: these are *dependent* nouns and particles, such as -nehk-, -ēyaw-, -ōhn- in § 7, or, say (with two suffixes), -ēt-a[?]nemw- in kēta[?]nem *thy fellow-cur, wēta[?]nemon his fellow-cur.* No root begins with a cluster; since every word begins with a root or one of the four prefixes,

no Menomini word begins with a cluster. The vowel e is probably nowhere to be set up in the first syllable of a basic form.

Roots, like suffixes, show morphological variation. Reduplication is the commonest form of this. Normally, it consists in prefixing the first non-syllabic followed by ā: pakam-: pakāmēw *he strikes him, pā-pakam-: pāpakāmēw he beats him.* There are also irregular types of reduplication, as pōhkonam *he breaks it across by hand, pō[?]pōhkonam he repeatedly breaks it.*

10 When an element ending in non-syllabic precedes an element beginning with a consonant, a *connective -e-* is inserted. Thus, root pōN- *cease with suffix -m- by speech* gives pōN-e-m-: pōnemew *he stops talking to him.* Contrast, on the one hand, pōN-ēNem-: pōnēnemew *he stops thinking of him,* and, on the other hand, kēhkā-m-: kēhkamew *he berates him.*

11 If an element ending in vowel plus w precedes an element with initial w, the -e- is used: kaw-e-wēp-: kawēwēpenew *he flings him prostrate; contrast kaw-ēN-: kawēnēw he lays him prostrate, and sēk-wēp-: sīkwēpenam he flings it scattering.*

Irregularly, -e- is used between consonant and w in a few combinations, as esp-e-wēp-: espēwēpahew *he tosses him aloft by tool or on horns.*

12 Irregularly, certain combinations do not take connective -e-. Root en- *thither, thus* with suffix -pahtā- *run,* gives en-pahtā-: ehpahtaw *he runs thither; cf. en-ēNem-: enēnemew he thinks so of him, and wāk-e-pahtā-: wāke-pāhtaw he runs a crooked course.* Verb stem kemewan-, with initial change (§ 8) kēmewan-, with inflectional suffix -k- gives kēmewan-k-: kēmewāhken *whenever it rains, kēmewah when it rained; cf. kemēwan it is raining and ē[?]teken whenever it is in place, ē[?]tek when it was in place.*

In such forms, if the first consonant is other than n, it is replaced by h: sēnak-at-k-: sēnakāhken *whenever it is difficult, sēnah when it was difficult, cf. sanākat it is difficult; atōt-pw-: atūhpwan table, cf. atōtapiw he sits on something, sakīpwak if I bite him.*

13 Before e, ē, y, final t ~ č and n ~ s. Thus, pyēt-e-m- ~ pyēčem- : pīčemew *he calls him hither*; cf. pyēt-ohnē- : pītohnēw *he walks hither*. en-yā- ~ esyā- : esyāt *if he goes thither*; cf. en-ohnē- : enōhnēt *if he walks thither or thus*. -ēn-e- ~ -ēse- : wēs *his head*; cf. wēnowawan *their heads*. ōn-e- ~ ōse- : ōs *canoe*; cf. ōnan *canoes*. peʔt-e- ~ peʔče- : pēʔč *by error*; cf. peʔtenam *he touches or handles it by error*.

In a few cases, the mutation is made before the suffix -əh- which derives local particles from nouns: wēseh beside wēneh *on his head*.

Certain n's are not subject to this alternation; we designate these in our basic forms by N; in actual speech, then, this theoretical N is replaced by n.

14 Irregularly, in certain forms, t is replaced by s before ε and ā. So always before -əhk- *by foot or body movement* and -āp- *look*: pyēt-əhk- ~ pyēšəhk- : pīšəkw *it moves hither*; weht-āp- : ohsāpomew *he looks at him from there*, cf. weht-εN- : ohtēnam *he takes it from there*. Other suffixes, less often: weht-εčyē- : ohsēčīnam *he takes it bodily from there*.

15 Successive vowels are in every instance modified.

After long, short other than o drops: asyē-εN- : asyēN- : asīnam *he pushes it back, rejects it*, cf. kāhtenam *he shoves it*. nakā-εN- : nakānam *he stops it by hand*, cf. nakāʔtaw *he stops, comes to a standstill*.

ā-o ~ ō: kyāʔtā-ohnē- : kyāʔtōhnēw *he walks in a circle*, cf. kyāʔtā-hsemw- : kyāʔtāhsemow *he dances in a circle* and pōN-e-hsemw- : pōnehsemow *he stops dancing*.

ē-o ~ yā: asyē-ohnē- : asyāhnēw *he walks backwards*.

ā-ā ~ ā: nakā-āpyē- : nakāpīnaʔsow *he brings his horses to a stop*, cf. mat-āpyē- : matāpīnaʔsow *he drives badly*.

Between other long vowels, y is inserted. akwā-ēʔn- : akwāyēʔnen *it is blown to shore*, cf. akwā-čemē- : akwāčemew *he paddles to shore*; asyē-ēʔn- ~ asyēyēʔn- : asīyēʔnemew *he blows him back*; weNē-ākw- : onīyākwahew *he gets him up from bed*, cf. wēNē- : onēw *he gets up*.

16 After consonant, the first of two semi-

vowels is dropped: ahkekw-yān- : ahkēkyan *hearth*, cf. ahkēkoh *in the kettle* (§ 20); aʔseNy-wēk- ~ aʔsenwēk- : aʔsenīkat *it is hard-woven cloth*, cf. aʔsenyak *stones*, wāpesk-wēk- : wāpeskīkan *white linen*, wāpeskesew *he is white*; mehkw-wēk- ~ mehkwēk- : mehkiikan *red flannel*, cf. mehkwākom *red blanket*, netākom *my blanket*. In some basic forms, we write twy instead of ty merely to bar § 13; thus, we set up pēnt-ēkon-āhtwy- to give pēhčekonāh *sacred bundle*, plural pēhčekonāhtyan.

17 Initial w-ō- ~ ō-: with kēyaw, nēyaw, wēyaw compare kōhneʔ, nōhneʔ, w-ōhn- : ōhnan in § 7.

Initial w-ε- ~ o-: with the preceding compare the normal forms of the prefixes: ke-, etc., as ketān *thy daughter*, netān *my daughter*, we-tāN- : otānan *his daughter*, otānew *he has a daughter*, but, with initial change, wētānet *the parent of a daughter*.

Initial w does not occur before o; initial y does not occur before short vowels, either in basic forms or in the actual language.

Initial wyē- ~ ī- is set up for a few forms like wyēw-ēw: īwēw *futuit illam*.

18 When an element in vowel plus w precedes an element with initial ε or ə, the combination is normally retained, as kaw-εN- : nekāwenan *I lay it flat*. Irregularly, however, in certain forms, a replacement is made. This happens always when the w ends a verb stem and the ε or ə begins an inflectional ending, but there are also other cases. The following rules hold for ə as well as for ε.

awε, āwε, owε ~ ō: ket-εnaw-εne- ~ ketēnōne- : ketēnōn *I resemble thee*, cf. ket-εnaw-e-m : ketēnawem *thou resemblest me*; -amow-εne- ~ amōne- : kesākaʔsamōn *I give thee tobacco*, cf. kesākaʔsamowem *thou givest me tobacco*; Net-εhtanaw-εm- ~ netēhtanōm- : netēhtanom *my domestic animal*.

Before k, t, s, however, verb stems in -aw- and -amow- have ā instead of ō: εnaw-ək- : enāk *the other one resembles him*; -amow-ək- : nesākaʔsamāk *he gives me tobacco*; εnaw-εtw- : enātowak *they resemble each other*; -amow-esw- : nātamasow *he helps himself*, cf. nātamowēw *he helps him*.

uwε, wāwε ~ wā: pyēt-uw-ək- ~

pyēt-wāk- : pīt-wāk *the other brings it to him*, cf. pīt-wew *he brings it to the other*; mam-wāw-ək- : mam-wāk *the other takes it from him*, cf. mam-wāw-ēw *he takes it from the other*.

ewe, ēwe, ēwe, yāwe ~ yā: wēt-yēw-ək- ~ wēčyāk- : wīčyāk *the other one accompanies him*, cf. wīčiwēw *he accompanies the other*; -neNyew-ehkwēw- ~ -nenyāhk-wēw- : maskihkiwenenyāhkiw *medicine woman*, cf. maskihkiweneniw *medicine man* and pīthkiwēw *he brings a woman*; omē?nomenēw-ehkwēw- : omē?nomenyāhkiw *Menomini woman*, cf. omē?nomenēw *Menomini*; nēw-ək- : nyāk *the other sees him*, cf. nēwēw *he sees the other*; kyāw-ehkom- : kyāhkomew *he is jealous of him*, cf. kyāwēw *he is jealous*.

In a few forms, however, ēwe, ēwe is replaced by iyo : wyēw-ək- ~ iw-ək- : iyo *futura est ab illo*; wyēw-ēt- ~ iw-ēt- : iyotowak *alter alteram futuunt*.

19 Irregularly, in a few forms, vowel plus w contracts with other vowels, chiefly aw-ā ~ wā : kēsaw-ākamy- ~ kēs-wākamy- : kīswākamiw *it is warm liquid*, cf. kēsawan *it is warm*.

20 After consonant, y, w plus vowel other than a, ā are replaced by vowels.

yē ~ ē: kōNy-ēwe- : kōnēwew *it is snowy*, cf. kōNy- : kōn *snow*, plural kōNy-ak : kūnyak *lumps or masses of snow*, and awēt-ōk-ēwe- : awēt-ōkewew *he, it is of spirit nature*, from awēt-ōk *spirit*, plural awēt-ōkak.

wē ~ ō: Nētyānw-ēwe- : nīčyānōwew *he is childish*, cf. Nētyānw- : nīčyān *child*, plural Nētyānw-ak : nīčyānok (§ 21) *children*.

ye, we ~ i: Ne-menw-e-hsenē- ~ nemenihsenē- : nemēnihsenēm *I am well placed*, cf. menw-āp-ant- : menwāpahtam *he sees it well*.

yē, wē ~ ī: menw-ēNent- : menīnehtam *he likes it*, cf. en-ēNent- : enēnehtam *he thinks so of it*; pyē-w : pīw *he comes*, cf. pyā-t : pyāt *if he comes*, and, for the morpholexical variation of ā and ē, nepēw *he sleeps*, nepāt *if he sleeps*. To stems which we set up with wyē- (§ 17), the prefixes are added with t and the replacement is made; ket-wyēw-āw : ketiwāw *futuis eam*. Similarly, ket-wyēw-ene- : ketiyon (§ 18) *te futuo*. However, wē after consonant is kept in -wēp- *throw* (§ 7) and in a few words such as mahwēw *wolf*, moswēn *shawl*.

ye, yā ~ e: a?napy-ehkē- : a?napehkew *he makes nets*, cf. a?nap *net*, a?napyak *nets*, and

wēkewamehkew *he builds houses*, wēkewam *house*, plural wēkewaman; a?seNy-əh : a?seneh *on the stone*, cf. a?sen *stone*, a?senyak *stones*, and wēkewameh *in the house*; a?seNy-ens-ak ~ a?senensak : a?senēhsak *little stones*, cf. wēkewam-ens-an- : wēkewamēhsan (§§ 22, 34) *little houses*.

wē, wā ~ o: ahkēkw-ehkē- : ahkēhko-hkew *he makes kettles*, cf. ahkēkw- : ahkēh *kettle*, ahkēkw-ak : ahkēhkok' (§ 21) *kettles*; ahkēkw-əh : ahkēhkoh *in the kettle*; ahkēkw-ens-ak ~ ahkēhkonsak : ahkēhkōhsak *little pails*; sak-e-pw-ent- ~ sakepont- : sakēpoh *if he is bitten*, cf. sak-e-pw-ak : sakīpwak *if I bite him*, and suffix -ent- in pakam-ent- : pakāmeh *if he is struck*; sak-e-pw-ək- ~ sakepokw- : sakēpok *the other bit him*, cf. pakam-ək- : pakāmek *the other struck him*. To initial wē- the prefixes are added with t and replacement is made: Net-wetāNe- ~ netotāne- : netōtānem *I have a daughter*, cf. wetāNe- : otānew *he has a daughter*, from wē-tāN- : otānan *his daughter*.

For yō, yo I can cite no cases.

wō ~ ō: there seems to be no example in my notes; as I am not a native speaker, I cannot guarantee words which I form, but I should not hesitate to say ēhk-w-ōnt- : ēhkōhtah *as far as he carried it on his back*, cf. ēhk-wahah *as far as he went into the water*, and panōhtam *he dropped it from his back*.

wo ~ o: ēhk-w-ohnē- : ēhkohnet *as far as he walked*, cf. ēn-ohnē- : ēnohnet *the way he walked*.

21 ya, wa, yā, wā are retained: a?senyak *stones*, me?tekwak *trees*, pyāt *if he comes*, mwāk *loon*. In actual sound, yā, wā after non-syllabic are falling diphthongs [i:a, u:a].

Irregularly, in certain forms, wa after consonant is replaced by o. This occurs when the a begins an inflectional ending in the paradigms of most nouns and verbs: ahkēkw-ak : ahkēhkok *kettles*; contrast, with wa kept, me?tekwak *trees*; mehk-amw-ak : mehkāmok *they find it*, cf. mehk-amw- : mehkām *he finds it*, and pītawak *they bring it*, beside pītaw *he brings it*. In word-formation less often: wāp-osw-akom- : wāposokom *beside wāposwakom rabbit skin*, but always apēhs-osw-akom- : apēhsosokom *deerskin*, cf. wāpos *rabbit*, apēhsos *deer*, with plurals wāposok, apēhsosok.

22 Before *n* plus consonant, *ɛ* is replaced by *e*: pakam-ent ~ pakament- : pakāme*h* if he is struck; en-ent- ~ enent- : enē*h* (§ 31) if he is called so; kε-set-ens-an ~ kesetens-an : kesētēhsan (§ 34) thy toes; mēt-enkwāmw- ~ mētenkwāmw- : mīte*h*kwamow dormiens se concacat.

23 Clusters of *n* plus consonant are replaced by *h* plus consonant; examples in § 22.

24 Final vowels are dropped: āsetē- : āset in return, cf. āsetē-hsem- : āsetēhsemew he lays them to overlap, āsetē-εhkaw- : āsetēhkawew he crosses paths with him; contrast the treatment of final *t* before -εhk- in § 14; ōse- : ōs canoe, etc., § 13.

25 Final non-syllabics are dropped until only one is left: mε[?]tek- : mε[?]tek tree, cf. mε[?]tekwak trees; ahkēkw- : ahkē*h* kettle; a[?]napy- : a[?]nap net, cf. a[?]napyak nets.

Excepted are the clusters [?]č and [?]s: pε[?]t-e- ~ pε[?]če- : pē[?]č by error; namē[?]s- : namē[?]s fish.

26 Irregularly, in certain forms, one of two like consonants together with the intervening vowel, is dropped (haplology): sēhk-ākamy- : sēhkamiw it is open accessible water, cf. sēhkehnen it lies beached; kēhk-e-kātē- ~ kehkatē : nekēhkatep my garter, cf., without haplology, kēhk-e-kātē- : kēhkēkātēp garter.

27 Metathesis and distant dissimilation occur in a very few forms: wēskew-εse- ~ wēskyāse- : wyāskesew he is good, cf. wēskew-at-w- : wēskewat it is good, and mat-εse- : matēsew he is bad, ugly; mε-motwy-ens- : menūtī*h* someone's bag, a bag, cf. kemūtī*h* thy bag, nemūtī*h* my bag, omūtī*h* his bag.

28 Alternation of short and long vowels is complex but very regular. In this alternation, the long vowel corresponding to *ə* is *ē*; for basic *u* I have no example. Certain words are excepted from this alternation; we shall call them *atonics*.²)

²Historically, they are either words which were atonic at a bygone time when the language had a stress accent which produced the present alternations of quantity, or loan words from languages which have not the Menomini alternation. Stress is not distinctive in the present-day language.

29 In monosyllables, short vowels are replaced by long: pε[?]t-e ~ pε[?]č- : pē[?]č by error; mw-ək- ~ mok- : mōk the other eats him. Contrast atonics: sew as it were.

30 A syllable whose vowel is followed by a cluster is *closed*; any other syllable is *open*. After a closed syllable, a long vowel in an open syllable is replaced by a short vowel: kōhn-ēw : kōhn*ew* he swallows him, cf. mēnēw he gives it to him; metehn-ēw : metē*h*n*ew* he tracks him; ne[?]n-ēw : ne[?]n*ew* he kills him; kēhkā-m- : kēhkam*ew* he berates him, cf. kēhkā-nt- : kēhkā*htam* he berates it. Exceptions, e.g., anohkīw he works, maskīhkīwen-iw medicine man.

31 If the first two vowels of a word are short, the second is replaced by a long. Excepted are *glottal* words, whose first syllable contains a short vowel followed by [?]. Ne-pemāt-εse- : nepēmātesem I live, cf. pemātesew he lives; pem-ohnē- : pemō*h*n*ew* he walks along, cf. pitoh*new* he walks hither, Ne-pem-ohnē- : nepēmoh*new* I walk along, pēm-ohnē- : pēmoh*net* when he walked by; kan-ək- : kanēk the other escaped him, cf. pakam-ək- : pakāmek the other struck him; en-ent- ~ enent- : enē*h* if he is called so, cf. pakam-ent- : pakāme*h* if he is struck; Net-ahkow-ək- ~ netahkōkw- : netāhkōk he comes next after me, cf. ahkow-ək- : ahkōk the other comes next after him, so also in the compound word nenaw-ahkōk he will come next after me, for internal sandhi does not carry across the suture of compound words. Further, for instance, mēhk-amw- : mēhkām he finds it, Ne-mēhk-ān- : nemēhkān I find it, but, in compound, nekēs-mēhkān I have found it; contrast pōn-amw- : pōnam he puts it in the pot, nepōnān I put it in the pot.

Glottal words are excepted: ne[?]n*ew* he kills him; when a prefix is added, the resulting form is not a glottal word: Ne-ne[?]n- : nenē[?]naw I killed him; pε[?]tenam he takes it by error. Atonic, for example, nekot one (but nekōtēs at one time); mesek and, also; anohkīw he works (but netānohkim I work).

32 If the even (second, fourth, etc.) syllable after the next preceding long vowel or after the beginning of a glottal word, is open and has a long vowel, this long vowel is replaced

by short: *nōhtaw-ēw* : *nōhtawew he hears him*, cf. *pakam-ēw* : *pakāmēw he strikes him*, *pāpakam-ēw* : *pāpakamēw he beats him*; *pā-pem-e-ke-h-ēw* : *pāpemekehew he brings him up*; *ačēt-e-kāpowe-h-ēw* : *ačēčekapowehēw he stands him upside down*, cf. *en-e-kāpowe-* : *esēkāpowew he stands so*; *Nē-kēhken-ān-* : *nekēhkenan I know it*, cf. *nenaw-kēhkēnān I shall know it*; *a[?]sek-εN-ēw* : *a[?]sekenew he picks them up*, cf. *pe[?]t-εN-ēw* : *pe[?]tenēw he touches him by error*.

33 If the even syllable (as in § 32) is closed and contains a short vowel, this short vowel is replaced by a long: *kēhken-ank-wā[?]* : *kēhken-āhkwa[?]* *that which they know*, cf. *kēhken-ank-* : *kēhkenah that which he knows*, *kehken-ank-wā[?]* : *kēhkīnahkwa[?]* *if they know it*, *kehken-ank-* : *kēhkēnah if he knows it*; *kēmew-an-ken-* : *kēmewāhken whenever it rains*, cf. *kēmew-an-k-* : *kēmewah when it rained*, *kēmew-an-k-* : *kēmewah if it rains*; *māmat-εhkā-* : *māmasēhkaw it goes poorly*, cf. *pōnehkaw it stops going*; *ko[?]t-ank-wā[?]* : *ku[?]tāhkwa[?]* *if they fear it*, cf. *ko[?]tah if he fears it*, and, with initial change (not a glottal word, since the first vowel is long), *kō[?]t-ank-wā[?]* : *kū[?]tahkwa[?]* *that which they fear*; *a[?]sek-εN-ank-wā[?]* : *a[?]sekenāhkwa[?]* *if they pick it up*, cf. *a[?]sekenah if he picks it up*, *pe[?]t[?]enahkwa[?]* *if they take it by accident*.

34 Certain forms retain a long vowel against the above habits. So the suffix *-wēk-* *cloth*, as *wāpeskīkan white linen*; the word *onāwanik brown squirrel*. The diminutive suffix *-ens-* (together with its variations, such as *-ons-* § 20) always lengthens its vowel: *kesētēhsan thy toes*, *anēmew-ens-* ~ *anemons-* : *anēmōhsak little dogs*. Some alternations of quantity are morpholexical rather than morphophonemic. Thus, when the abstract noun suffix *-N* is added to verb stems in *-kē-*, the result is *-kaN* : *kēskesekēw he cuts things through*, *kēskesekan scythe*.

35 If postconsonantal *y*, *w*, or any one of the high vowels, *i*, *ī*, *u*, *ū*, follows anywhere in the word, the vowels *ē* and *ō* are raised to *ī* and *ū*, and the vowel *o* in the first syllable of a glottal word is raised to *u*: *mayičekwa[?]* *that which they eat*, cf. *mayēček that which he eats*; *āte[?]nūhkuwew he tells him a sacred story*, cf. *āte[?]nōhkew he tells a sacred story*; *sehk-e-hsen-k-wā[?]* ~ *sehk-ē-hsehkwa[?]* : *sehkīhsehkwa[?]* *if they lie down*, cf. *sehkēhseh if he lies down*; *ku[?]natwā[?]* *if they fear him*, cf. *ko[?]načēn if he fears him*. This alternation sometimes fails to take place in long words: *kēwaskepīw* beside *kīwaskepīw he is drunk*. On the other hand, it is often extended to compound words and short phrases: *kīs-pīw* beside *kēs-pīw he has come*. Since *ū* occurs only in this alternation, it is not a full phoneme.

36 The morphophoneme *ə* is replaced by *e*: *pakam-ək^w-* : *pakāmek the other one struck him*; *wēkewam-əh* : *wēkewameh in the house*.

37 The vowel *ε* is replaced by *e* in the first syllable of words except before a cluster of *h* or *ʔ* plus consonant: *pemohnē-* : *pemōhnew he walks along*; *Neset-* : *nesēt my foot*. Contrast *Nehsehs-* : *neh[?]sēh my younger brother or sister*; *Nē[?]neh^s-* : *ne[?]neh my elder brother*; *pe[?]tenam he touches it by error*; *kēhkēnam he knows it*.

38 The forms now arrived at are *phonemic* forms of the actual Menomini language. Menomini phonetics, however, allows a great deal of latitude to some of its phonemes, and of some overlapping between phonemes. Thus, phonemic *ε* is rather widely replaced by *e*, except where *h*, *ʔ* plus consonant follows; we have used the morphophoneme *ə* for the cases where this replacement is universal and therefore phonemic. Some speakers partially and some quite constantly replace *i* by *e*.