Some years ago, I typed the index of *Handbook of American Indians North of Mexico* (‘Hodge’) edited by Frederick Webb Hodge, Smithsonian Institute Bureau of America, Ethnology Bulletin 30 (part 1 1907; part 2 1910). The two volumes combine to make a treasure trove of unusual words and letter combinations. Here, I offer examples of words covering a range of logological genres, with brief descriptions. A particular word may cater for more than one of the genres.

**ALPHABET**

**ALPHABET HALVES**

1. The *longest words made of letters from the 1st half of the alphabet* have 13 letters:
   - CHICHILLICALE (= Chichilticalle, ‘red house’) a ruined pueblo nr. mouth of San Pedro, California
   - MECHGACHKAMIC a former village perhaps belonging to the Unami Delawares in N.J.

2. The *longest word made of letters from the 2nd half of the alphabet* has 11 letters:
   - SONONTOUONS (= Seneca, ‘place of the stone’) an influential tribe of Iroquois originally occupying the part of N.Y. between Seneca Lake and Geneva R.

3. The *two halves of the word are made of letters from 1st and 2nd halves of alphabet & vv.*
   - BACCA.TOONS (= Buckaloon) former Seneca village on Allegheny R., Warren co., Pennsylvania
   - POTO.MACK (= Potomac) an Indian town 55m. from Chesapeake bay, in Stafford co., Virginia

**ALPHABET ODD AND EVEN LETTERS**

1. The *longest word made from the odd letters of the alphabet* has 15 letters:
   - MASQUIKOUKIOEKS (= Maskegon, ‘they of the marshes or swamps’) an Algonquin tribe, closely related to the Cree, occupying a region stretching from L.Winnipeg to Hudson Bay.

2. There are no words made solely from the *even letters of the alphabet*

**ALPHABETICALLY-CONSECUTIVE LETTERS**

1. Each of these words has a *trigram of alphabetically-consecutive letters*:
   - ABCHAS (= Abhika) one of the older of the Upper Creek towns, near upper Coosa R., Alabama
   - IL.DEF.NSONO (San Ildefonso de Cieneguita) a mission of Sonora, Mexico
   - TSEGHI (=Chelly ‘among the cliffs’) canyon with cave dwellings on the Navaho reserve N.E. Arizona
   - HIJAMES (= Sijames) a former tribe of Coahuila, N.E. Mexico
   - NOPAS (= Unharik) a Karok village on the Klamath R., California
   - OPQUIVE (= Walpi, ‘place of the notch’) one of the 6 villages of the Hopi in Arizona
   - STUIK a Bellacoola village on Bellacoola R., British Colombia
   - TUVAK a Tahagmiut Eskimo village on the north coast of Labrador

2. Each of these words has a *trigram of alphabetically-consecutive letters in reverse*:
   - REDCAPS = Opegui, the Yurok name of the Karok village opposite the mouth of Redcap creek on Klamath R., N.W. California
   - CONNEFEDAGOES (= Oka) a modern village of Iroquois, Nipissing, and Algonquin, on the Lake of the Two Mountains, near Montreal, Quebec
   - NARIHGANSETS (= Narraganset, ‘people of the small point’) an Algonquin tribe, formerly one of the leading tribes of New England
ALGONMEQUIN (= Algonkin, ‘at the place of spearing fish and eels’) originally applied to the Weskarini, a small Algonquin tribe formerly living in Quebec

PONCA one of the 5 tribes of the Dhegiha group of the Siouan family

WOPPOTSIT (= Wohpotsit, ‘white wolf’) a family group of Cheyenne, consisting of mixed Sutaio and Heviqsnipahis. They take their name from the chief.

UTSIA (= Ute) an important Shoshonean division in Colorado, Utah and N. Mexico

3. alternate letters are alphabetically-consecutive:

CADOES (=Kadohadacho, ‘real Caddo’) tribe of the Caddo confederacy, originally of Red R. Louisiana

KLOMA div. of the Nishinam at Coloma, between American R. and Yuba R., Eldorado co., Cal.

TKALAMA (= Thlakalama) a Chinookan tribe formerly residing at the mouth of Kalama R., Cowlitz co., Washington

ELJMAN a former Chumashan village near the windmill of La Patera, near Santa Barbara, Calif.

SETAUK (= Setauket) Algonquin tribe formerly occupying the N. shore of Suffolk co, Long Is. N.Y

4. alphabetically-consecutive letters anywhere in word in any order:

abcede BAGADUCE a peninsula in Hancock co., Maine on which Castine is situated
cdefghi CHAGINDUEPFTEI an Atfalati band formerly living between Hillsboro and Sauvies id., Washington co., Oregon

mnoqp MOQUOPEN (= Mecopen) an Algonquin village near mouth of Roanoke R., N. Carolina

opqrst DAΣAMOTIQUEPERC (= Dasamonquepeuc) an Algonquin village on coast of Dare co., N.C. opposite Roanoke id.

rstuv SUIVIRITS a division of Ute formerly occupying the castle valley country in Utah

wxy TOXAWAY a former Cherokee settlement in S. Carolina

The greatest number of alphabetically-consecutive letters anywhere in a word is 8:

ghijklmn KICHJUAGMIJUTE (= Ikogmiut) a tribe of Alaskan Eskimos inhabiting the Lower Yukon as far as Makak

ALPHOMES

1. alphomic words have their letters in alphabetical order. The longest have 6 letters:

ADDEES (= Adai) a tribe of the Caddo confederacy living inland from the Gulf of Mexico

BIOXY (= Biloxi, ‘first people’) a small Siouan tribe formerly living in S. Mississippi

CHILTZ (= Chehalis) a collective name for several Salishan tribes on Chehalis R. & Grays Harbor

2. reverse alphomic words have their letters in reverse alphabetical order. Washington

The longest has 7 letters:

ZUTOIDA (= Tutoida) a former Sobaipuri rancheria on the Rio San Pedro, Arizona

INVARINTS

A letter is deemed to be invariant when it occupies its alphabetical position in a word. These words each have 4 invariant letters, the maximum found:

AHOUENROCHRONGNS (= Wenrohrongon) possibly lived nr. oil spring of Cuba, Allegany co.N.Y

APPALACHICOLAS (= Apalachicola) a Hitchiti town formerly situated on the Chattahoochee R.

ATCHITCHiken (‘reaches the top of the brow’) a village of the Spences Bridge band of the Ntlakapamuk on N. side of Thomson R., B.C.

CHICTAGHICKS (= Illinois) a confederacy of Algonquin tribes, formerly occupying S. Wisconsin, N. Illinois and sections of Iowa and Missouri.

HACKINGHSAKH (= Hackensack, ‘the stream that unites with another in low level ground’) a former division of the Unami Delawares, N.J.

KICHESIPPINIQUEK (=Kichesippini, ‘men of the great river’) once an important tribe living on Allumette island in Ottowa R., Quebec province

KOQUEHTUK (= Kokait) a division of the Bellabella living on Millbank Sound, S. Dakota

MICHILLMACKINOCK (= Michilimackinac, ‘place of the big wounded person’) a name applied at various times to Mackinac island in Mackinac co., Michigan
NICKITCHITCLUM (=Dakubete) group of Athapascan villages formerly on Applegate Ck.Oregon
QUIYOUGHQNOHANOCKS (= Quoicohancok, ‘gull river people’) a former tribe of the Powhatan confederacy in the James R. in Surrey co., Virginia
SACMEUGH (= Sakumehu) a Salish division on the Skagit R., Washington
WICKERSHECK (= Wequaesgeek, ‘end of the marsh’) an important tribe of the Wappinger confederacy that formerly occupied S. Fairfield co., Connecticut, and Westchester co., N.Y.

**BIGRAMS, TRIGRAMS, TETRAGRAMS and OCTOGRAMS**

**BIGRAMS**

1. Each of these words has a bigram which occurs 4 times:

- AH WAHLAHWAHLAH (= Wallawalla, ‘little river’) a Shahaptian tribe formerly living in Washington & Oregon
- AI WAIWAIKAI (= Wiwekae) a clan of the Lekwiltok, B.C.
- AK KAKHLYAKHLYAKKAT (= Kaklaaklia) a Koyukukhota village on the Koyukuk, at the mouth of Sukloseanti R., Alaska
- AN YANKWANANAYANNI (= Iroquois) a land of the Ononchataronon, a former tribe in lower Rio Grande
- AW PUTAWATAWMAWS (=Potawatomi,’people of the place of the fire’) lived on shore of L. Huron
- CA ESCABACACASCASTES (= Escaba) a former tribe, probably Coauiuletecan, on lower Rio Grande
- ON CHONONTOUARONON (= Seneca, ‘place of the stone’) an influential tribe of Iroquois originally occupying the part of N.Y. between Seneca Lake and Geneva R.

2. this word has a bigram which occurs 5 times:

- SH SHESHAPOOSHSHOISH (= Montagnais) an Athapascan group living on the plains and valleys of British N. America; they came from the Rocky mountains

3. Each of these words has an unbroken series of 3 like bigrams:

- AC PAMACACACK (= Pamacocack) a former village on the Maryland side of the Potomac
- AN PANANAN (= Pawnee) a confederacy belonging to the Caddoan family. The Pawnee tribe finally established themselves in the valley of Platte R., Nebraska
- HA SHAHAXANNIH (= Shahanik) an important linguistic family occupying S.W. Idaho, S.E. Washington and N.E. Oregon
- IK KIKKITOCK (= Kiktaguk) an Unaligmiut Eskimo village on S. coast of Norton sd., Alaska
- LA MOLALALAS (= Molala) a Waialapua tribe; little is known of their history
- NI SAGAIGUNININ (= ‘lake people’) a tribe which lived S.W. of Ottawa R., Ontario
- ON SHAONNONONS (= Shawnee, ‘southerners’) formerly a leading tribe of S. Carolina, Tennessee, Pennsylvania and Ohio
- OT LAPOTOTOT (= Lopatatimmi) a division of the Miwok, formerly living in Eldorado or Sacramento co., California
- TU TUTUTUNNE (= ‘people close to the water’) a clan of the Tuputni above the mouth of Rogue R., Oregon

**TRIGRAMS**

Each of these words has a trigram which occurs 3 times:

- KOU KOUAKOUKOUKOUK (= Wakouingouecheekw) an Algonquin tribe living on a river S. of Hudson bay, Quebec
- KLA KLANOKLATKLAM (= Kalispel) a Salish tribe around Salish lake and river in N. Idaho and N.E Washington
- CHI CHIPPANICKCHICK a tribe, either Chinookan or Shahaptian, on Colombia R. in Klickitat co., Washington
- OUE QUEPERIOQUEIAQUEK (= Weperigweia) an Algonquin tribe living N. of St. Lawrence R., below Tadoussac, Quebec
- OUN QUNONGUNCHETAROUNONGAK (= Ononchataronon) an Algonquin tribe that occupied the district near Montreal, Canada, and wintered near the Hurons
TETRAGRAMS
This word has a tetragram which occurs 3 times:
TCHI TCHIPANTCHICKTCHICK (= Chippanchickchick) a tribe, Chinookan or Shahaptian, living on Colombia R. in Klickitat co., Washington

OCTOGRAMS
This word has an octogram which occurs twice:
UGHHARIE CONNUGHHARIEGUGHARIE (= Onoalagona, ‘big head’) a Mohawk village on the site of Schenectady, Schenectady co., N.Y.

CONSONANTS AND VOWELS

CONSONANTS
1. If Y is admitted as a C, the maximum unbroken run of Cs is 9:
KWYGSCHPAINAGMIUT (= Kwinak) a Kuskwogmiut Eskimo village and Moravian Mission in Alaska
2. the most consonants in alphabetical order is 7:
   (a) each of these 2 words has 7 Cs. One or more of the Cs is/are repeated:
   COLLAPISSAS (= Acolapissa) of Choctaw lineage, formerly living on L. Ponchartrain and on the Mississippi, in Louisiana
   JOLLILEPAS (= Ololopa, ‘smoke hole’) a village of the Maidu near Oroville, Butte co., Calif.
   (b) these 6 Cs are all different. The first 4 (k,l,m,n) are alphabetically-consecutive letters:
   KIILMANTAVIE a Kunmiut Eskimo village on the Arctic coast west of Wainwright inlet, Alaska
3. the most consonants in reverse alphabetical order is 6. These 6 Cs are all different:
   WATSEQUENDO (=Watequeorda’s Band) a Paviotso band, formerly living on Pyramid L., Nevada
4. homoconsonantals are words which contain one or more of just one of the 20 different consonants ( I exclude Y here). The most consonants, 4, were found for L, R, and S:
   LALAUILELA (= Lalautilola, ‘always crossing the sea’) a clan of the Tlatlasikoala
   OUALLAOULLA(= Wallawalla,‘little river’) Shahaptian tribe formerly living in Washington & Oreg.
   ARRAARRA (= Karok, ‘upstream’) they have no name for themselves other than that of ‘men’ or ‘people’. Lived on Klamath R. from Redcap Creek to India Creek, California
   SASSIS (= Sarsi, ‘not good’) a tribe of the Athapascan family who hunted on the upper Saskatchewan towards the Rocky Mts.

VOWELS
1. the maximum unbroken run of Vs is 9:
OUPERIGOUAOUAKSHI (= Weperigwia) an Algonquin tribe N. of St Lawrence R., Quebec
2. homovocalics are words containing only one of the 5 major vowels. These particular words have the greatest number of a particular vowel.
   A x 6 WARANAKARANA (= Naywaunaukaurah, ‘they are surrounded by bark or wood’) The Tuscarora name of a reputed people “encamped on the L. Erie”.
   E x 5 NEWEETEE (= Nawiti) a Kwakiutl town formerly at C. Commerell, N. coast of Vancouver id.
   I x 4 WILLIGII (= San Felipe) a mission village, probably on the lower Georgia coast
   O x 6 NOOWOTSOO (= Seamysty) a Chinookan tribe living at mouth of Cowlitz R., Oregon
   U x 5 SFUGUNUGUMUT (= Sfaganuk) a Kaiialigmiut Eskimo village between Dall lake and Etolin str., Alaska
3. AEIOU Words
An AEIOU word is one in which each of the 5 major vowels occurs just once, in any order. There are 163 such AEIOU words in Hodge.
   (a) shortest AEIOU word (6 letters):
   AIOUEZ (= Iowa, ‘sleepy ones’) one of the 3 Siouan tribes in the Chiwere group (with Oto and Missouri)
(b) **longest AEIOU word** (16 letters):
PASCHTOLIGMJUTEN (= Pastoligmiut) a subdivision of the Unaligiut Eskimo of Alaska

c) the **5 vowels occur in alphabetical order**:
GAN(N)EIOUS a former Iroquois village on the north shore of L. Ontario
NADSNESSIOUCK (=Dakota,'allies') the largest division of the Siouan family, known as the Sioux

d) There are no AEIOU words in which the 5 vowels occur in **reverse alphabetical order**.

e) the 5 vowels occur in either a **right or left circular order**:
**iouae** IROQUAES the confederation of the Iroquoian tribe comprised of the Cayuga, Mohawk, Onondaga and Seneca. They described themselves as ‘we are the extended lodge’
MICHONGUAVE (= Mishongnovi, ‘at the place of the others which remains erect’) a pueblo of the Hopi in N.E. Arizona

eioua MENICOUZHA (= Miniconjou, ‘those who plant beside the stream’) a div. of the Teton Sioux
**eauoi** SKETAPUSHOISH (= Montagnais) an Athapascan group originally from the Rocky Mts.
auoie CAUTONIES (= Kutena) a people forming a distinct linguistic stock in south east B.C.,

4. **AEIOU together**
As well as being the shortest AEIOU word, AIOUEZ (above) is the only word in which the 5 vowels appear as an unbroken group and which does not contain any extraneous vowels. Amongst those words which have one or more extraneous vowels, some have more than one 5-vowel group:

   (a) 2 different groups
   KICHAOUEIAK (= Kishkakon, ‘those who have cut tails’) the Bear band of the Ottawa; neighbours
   KICHAOUEIAK \of the Potawatami along the west shores of Lake Michigan

   (b) 4 different groups
   OUEPERIGUEIAOUKE (= Weperigweia) an Algonquin tribe living N. of St. Lawrence R., below
   OUEPERIGUEIAOUKE, OUEPERIGUEIAOUKE, OUEPERIGUEIAOUKE \Tadoussac,Quebec

5. **AEIOUY together**
In this word, the letter Y joins the 5 major vowels to form an unbroken 6-letter group:
AYEOUAI (= Iowa) one of the 3 Siouan tribes in the Chiwere group (with Oto and Missouri)

**CONSONANTS AND VOWELS**

1. the **highest consonant to vowel ratio** (7C:1V) occurs in this 8-letter word:
STAHLLCH (= Stlaz) a village of the Spences Bridge band of Ntlakyapamuk near Ashcroft B.C.
   With 14 Cs and 2 vowels, this word has the same C:V ratio:
TSCHLAHTSCHS (= Clatsop, ‘dried salmon’) a Chinookan tribe on the Colombia R., Oregon

2. the **highest vowel to consonant ratio** (8V:1C) occurs in a 9-letter word:
AIOUNOUEA (= Iowa) one of the 3 Siouan tribes in the Chiwere group (with Oto and Missouri)

3. the **longest word in which Cs and Vs alternate** has 24 letters:
ANIBIMINANISIBIWININIWAK ‘Pembina (cranberry) river men’ - a Chippewa band living on Pembina R. in N. Minnesota and the adjacent part of Manitoba

**DESIGN**

TALL AND SHORT LETTERS

1. the **longest word made from ‘ascenders’** (b,d,f,h,i,k,l,t) has 10 letters. It is also the longest word made from ‘ascenders’+ ‘descenders’ (the descendes being g,j,p,y)!
tthilkitik - a Yaquina village on the north side of Yaquina R., Oregon

2. the **longest word made from ‘short’ letters** (a,c,e,m,n,o,r,s,u,v,w,x,z) has 13 letters:
cooweescoowee - a district of the Cherokee Nation, Indian Territory
SYMMEY
1. the letters B, C, D, E, H, I, K, O and X exhibit horizontal symmetry.
   The longest word made from horizontally symmetrical letters has 14 letters:
   HOOKCHOIEOOCHE (= Okchayudshi) a former small Upper Creek town in Elmore co., Alabama
   The longest word made from vertically symmetrical letters has 13 letters:
   WAHTOOHTAH (= Oto, 'lechers') one of the 3 Siouan tribes forming the Chiwere group, the others being the Iowa and Missouri
3. the letters H, I, N, O, S, X and Z read the same when viewed upside down.
   The longest words made from upside down letters have 8 letters:
   NOSSONIS (= Nasoni) a former tribe of the Caddo confederacy. Their main village was on or near an eastern branch of Angelina R., Texas

SHOSHONI most northerly divn. of the Shoshonean family, formerly occupying west Wyoming

STRAIGHT LINE LETTERS
The straight line letters are: A, E, F, H, I, K, L, M, N, T, V, W, X, Y, Z.
The longest word made from straight line letters has 17 letters:
KAKHLYAKHLYAKAKAT (= Kakliaklia) a Koyukukhotana village at mouth of Sukloseanti R. Alaska

CURVED LETTERS
The longest word made from the curved letters C, J, O, S and U has 6 letters:
COOSUC ('at the pine') probably a Pennacook band formerly living in Coos and Grafton cos. N.H.

DOTTED LETTERS
The most dotted letters in a word which includes 'j' as well as 'i' is 6:
Nipisierinij (= Nipissing, 'at the little water, or lake') a tribe of the Algonquin living nr. L. Nipissing, Ontario

DOUBLED, TRIpled and QUADRUPLED LETTERS

DOUBLED LETTERS
1. 4 doubled letters:
   COLLAPPOHYEEAASS (= Calapooya) a division of the Kalapooian family in Oregon
   NAHCHQOREETTOOEE (= Nachuriteui, 'yellow village') a traditional pueblo of the Tigua of Isleta,
   NEECAWWEEGEE (= Neecoweegee) an unidentified Dakota band (the Minneconjou?) N. Mexico
   POCKETTALLEEHASSEE (= Pakan-tallahassee) a former Upper Creek town on P-T creek, Elmore
   PUCCUNTALLAUISSEE (= ditto above) Elmore co., Alabama
   TEENNENUGHHUUT (= Seneca) former Cherokee settlement in Oconee co., S. Carolina

2. 5 doubled letters:
   OOTKOOSSEEEKKALINGMOEQOT (= Ukusiksalirmiut, 'people possessing potstone kettles') a tribe of the Central Eskimo living on Back R., Canada

3. an unbroken sequence of 3 doubled letters:
   ACCOLLE (= Akuli) an Iglulirmiut village on the isthmus of the Melville Peninsula
   ARRAARRA (= Karok, 'upstream') they have no name for themselves other than that of 'men' or 'people'. Lived on Klamath R. from Redcap Creek to India Creek, California
   TOOTTOOTENAY (= Tututunne, 'people close to the water') a clan of the Tuputni above the mouth of Rogue R., Oregon
   SHAACKKOKE (= Scaticook, 'at the river fork') an Indian settlement on Housatoni R., below Kent, PEQUUTTOOG (= Pequot, 'destroyers') an Algonquin tribe of Connecticut Lichfield co. Connecticut
   SOONNOODAUGHWENOWENDA (= Cayuga, 'the place where locusts were taken out') a tribe of the Iroquoian federation formerly occupying the shores of Cayuga Lake, N.Y.
TRIPLED LETTERS
These words have an unbroken run of 3 like letters:
TAAAIALANAWAN (= Heshota Ayahltona, 'ancient buildings above') the ruins of a group of stone houses on the summit of Seed mountain near Zuñi pueblo, N Mexico
SKEEERE (= Skidi, 'wolves standing in water') a tribe of the Pawnee confederacy who settled on Loup R., Nebraska
WECHILLLA (= Wahkila) probably Moqueluman, formerly frequenting Stanislaus and Tuolumne reserves, central California
KOOOGAMEUTS (= Kowagniut, 'big river people') a tribe of western Eskimo of Alaska, on Kowak R., east of Kotzebue sd.
PASSSEEROO (= Pasara) a Karok village on Klamath R., California

QUADRUPLED LETTERS
This word has an unbroken run of 4 like letters. It also has an unbroken sequence of 4 doubled letters OOKKOOOO (counting the OOOO as 2 doubled letters), and 5 doubled letters in total.
COOKKOOOSEE (= Coos) the village or tribe of the Kusan family, formerly on Coos Bay, Oregon

HEADS AND TAILS
1. Two or more letters at the beginning of a word are repeated at the end of the word.
   (a) the simplest example is the Miami word - letter pattern 12?12 (see Miami Words below).
   (b) in this group of words, 2 repeated letters are separated by 2 letters:
AYOWAY (= Iowa) one of the 3 Siouan tribes in the Chiwere group (with Oto and Missouri)
CASICA (= Kasiha) former Lower Creek town on Chatahoochee R. in Chatahoochee co. Georgia
ESOPES (= Esopus) a division of the Munsee that lived on Hudson R. in Greene & Ulster cos., N.Y
GAYUGA (= Cayuga, 'the place where locusts were taken out') a tribe of the Iroquois confederacy, formerly occupying the shore of Cayuga Lake, N.Y.
HEICHE (= Eyeish) a tribe of the Caddo confederacy whose early home was on Eyeish Ck., Texas
ISATIS (= Santee, 'Knife lake') an eastern division of the Dakota
KAITKA (= Kalapooya) a division of the Kalapooian family in Oregon
MAKOMA Indians living northward of Fort Ross in Russian R. valley
UKIVUK (= Ukivok) a Kaviagmiut Eskimo village on King Island, Bering Strait, Alaska
YUNGYU the Opuntia cactus clan of the Chua (Snake) phratry of the Hopi
   (c) the shortest words with 3, 4 and 6 repeated letters respectively, the 2 letter groups separated by just a single letter:
ARIKARI (= Arikara, 'horn') a tribe forming the northern group of the Caddoan linguistic family
HLAUHLA ('surrounded by arrow-shaft bushes') The ruins of a Zuñi pueblo near Zuñi, N. Mexico
NIMENIM (= Comanche) the only southern tribe of the Shoshonean stock living entirely on the plains. An offshoot from the Shoshoni of Wyoming
OKEUKAVE (= Honsading) a former Hupa village situated on Trinity R., California
GUWSGWI (= Cooweescoowee) a district of the Cherokee Nation, Indian Territory
ISHIPISHI (= ISHIPISHI) a Karok village on Klamath R., California
CAHIKSCAHIKS (= Pawnee) a confederacy belonging to the Caddoan family. The Pawnee tribe finally established themselves in the valley of Platte R., Nebraska
COOWEECSOOSEE a district of the Cherokee Nation, Indian Territory
   (d) the shortest with 5 repeated letters has 2 intervening letters:
PALLATAPALLA (= Palos) a Shahaptian tribe formerly occupying the valley of Palouse R., in Washington and Idaho, and the N. bank of Snake R., to its junction with the Colombia
2. Two or more letters at the beginning of a word are sometimes repeated at the end of the word in reverse order. There are many words in which just 2 letters are repeated in reverse order, some being palindromes. Those listed are non-palindromic examples and so the 2 letter groups must be separated by more than a single letter. Here, the repeated letters are all trigrams.

SWAGLAWS (= Sawokli, ‘raccoon town’) a former Hitchiti town on Chattahoochee R., Barbour co.
WAHASHAW (= Kiyuksa) a band of the Mdewakanton Sioux living in a village on upper Iowa R.
SHANNOAHS (= Shawnee, ‘southerners’) formerly a leading tribe of S. Carolina, Tennessee, Pennsylvania and Ohio

NANABINENAN (= Nakasinena, ‘sagebrush people’) a division of the Arapaho in Colorado & Wyoming
AKAWENCHAKA a small band that formerly lived in North Carolina
KAUDJUKDJUAK a winter settlement of the Akudnirmiut Eskimo, Baffin land
KINONCHEPIRINIK (= Keinouche) one of the divisions of the Ottawa
SHAHSWEENTOWAHS (= Sisseton, ‘lake village’) one of the 7 original tribes of the Dakota
HATTAKIHOLLIHTAH (= Watakhulata, ‘beloved people’) one of the two Choctaw phratrys
NANKHAANSEINENAN (= Nakasinena, ‘sagebrush people’) a division of the Arapaho in Colorado and Wyoming

HAWAWWAHLAHTOOWAH (= Jemez) the Keresan name of the pueblo. A village on Jemez R. N Mexico

HETEROGRAMS

A heterogram is a word with no repeated letters. The longest heterogram has 14 letters:

KWICHPAGMJUTEN (= Ikogmiut) a tribe of Alaskan Eskimos inhabiting the Lower Yukon as far as Makak

HOMOMORPHS AND INTERNAL ISOMORPHS

Isomorphs are words of equal length having identical letter patterns with reference to the number and position of repeated letters. They possess no crashing letters. Vs and Cs are not differentiated.

These 3 words are mutual isomorphs, all having the same letter pattern (12234556) and no crashing letters. Each of these 3 particular words is also an internal isomorph, a word whose 2 halves have the same letter pattern, with no crashing letters (1223.4556).

N O O C . L E E T (= Nuklit) a Malemiut Eskimo village near C. Denbigh, Norton sd., Alaska
O T T W . A S S E (= Ottawa) intertribal traders and barterers living on Georgian bay, French R.
T U U K . S O O N (= Tucson, ‘black base’) former rancheria on site of the present day Tucson, Ariz.

INTERNAL ISOMORPHS

1. These words have 2 like letters in each half:

(a) Pattern 122.344

COO.SEE (= Kusa) a former town of the Upper Creeks on the Coosa R. in Talladega co., Alabama
SOO.KEE (= Soquee) a former Cherokee settlement on Soquee R., Sonoma co., California

(b) Pattern 121.343 (Memnon Words)

These 3 particular Memmons are mutual isomorphs as well internal isomorphs.

K O K . A I A (‘maggot-fly’) an abandoned Chilliwack village on Chilliwack R., British Colombia
N I N . U M U a Chumashan village on one of the Santa Barbara ids, Calif., probably Santa Rosa
T A T . E K E a Cowishan tribe on Valdes id., S.E. of Vancouver id., and N. of Galiano id., B. C.

2. This word has 3 like letters in each half:

TUTT.ELEE (= Tutelo) an eastern Siouan tribe formerly living in Virginia and N. Carolina

3. This word has two different like letters in each half: (see also Sequential Words below).

CHICH.ASHAS (= Chickasaw) an important Muskhoge tribe, originally in N. Mississippi
LADDER WORDS AND LADDER SEQUENCES

LADDER WORDS

KUKLUKTUK, MANTANTON, TULSULSUN, DALSALSAN, WESKESKEK and ZAGUAGUAS are 9-letter ladder words. Each word is a self-contained ladder in which each trigram (3-letter group) differs from its trigram neighbour(s) by a single letter, just as do the words in a word ladder.

KUKLUKTUK a Kuskwogmiut Eskimo Village on Kuskokwim R. below Kolmakof, Alaska
MANTANTAN (= Matantonwan, ‘village of the great lake which empties into a small one’) one of the two early divisions of the Mdewakanton Sioux at the mouth of the Minnesota R.
TULSULSUN the Takelma name (DALSALSAN) of Illinois R. The two ladder words TULSULSUN and DALSALSAN are synonyms.
WESKESKEK (= Wecquaesgeek, ‘end of the marsh’) an important tribe of the Wappinger confederacy that formerly occupied Fairfield co., Connecticut, and Westchester co., N.Y.
ZAGUAGUAS (= Akanaquint, ‘green river’) a Ute division formerly living on Green R., Utah

LADDER SEQUENCES

These words incorporate a 12-letter ladder sequence:
1. the sequence is made of 3 tetragrams:
   KOUAKOUIKOUESIOUEK (= Wakouingouechiwek) an Algonquin tribe living on a river S. of Hudson bay, Quebec
   KAKLIALKIAKAT (= Kaklialia) a Koyukukhotana village at the mouth of Sukloseanti R., Alaska
2. the sequence is made of 4 triplets:
   NAYWAUNAUKAURAUNAH (= Missisauga, ‘large outlet’) an Algonquin tribe, originally a division of the Chippewa living on the N. shore of Lake Huron
   OENRONRONNONS (= Wenrohronon, ‘the people or tribe of the place of floating scum’) this suggests that they lived near the famous oil spring of Cuba, Allegany co., N.Y.

MIAMI WORDS

These words have the letter pattern 12?12 (see Miami Words WW2000014)
AIXAI (= Eyeish) a tribe of the Caddo confederacy whose early home was on Eyeish Ck. in Texas
AKIAK a Kuskwogmiut village on Kuskokwim R. above Bethel, Alaska
AYMAY a village in east Georgia
HISHI (= Pueblo Largo, ‘long village’) a former Tano pueblo south of Galisteo, N. Mexico
INUIN (= Eskimo) a group of American aborigines, forming part of the Eskimauan linguistic stock,
   which formerly occupied nearly all the coasts and islands of Arctic America
KANKA (= Kaguyak) a Kaniagmiut Eskimo village on Shelikif strait in Alaska
KISKI a small division of the Maidu, formerly residing on Lower Sacramento R., California
MIAMI an Algonquin tribe in Wisconsin
SHASH a former Yaquina village on the Yaquina R., Oregon
TSITS the Water clans of the Keresan pueblos, N. Mexico

NUMBER SERIES WORDS

The numbers which make up various number series are converted to the letters which occupy the numerical positions in the alphabet. 1 = A, 2 = B etc. The number series under consideration here are prime numbers, square numbers, and Fibonacci numbers.
**PRIME WORDS**

1. ‘Prime words’ are made from the **letters which occupy the prime number positions in the alphabet**: B (2), C (3), E (5), G (7), K (11), M (13), Q (17), S (19) and W (23).

   The **longest prime word** has 9 letters:

   WESKESKEK (see *Ladder Words* above).

2. Alternatively, ‘prime words’ is used to describe **words having a prime number total**.

   The **heaviest prime word** weighs 293 and has 18 letters:

   TCUSTERXUTMUNNETUN (= Chusterhutmunnetun) a former village of the Chastacosta, the highest on Rogue R., Oregon.

3. The **longest word which complies with both definitions of ‘prime words’** is, again, the 9-letter WESKESKEK - total 109

**SQUARE WORDS**

1. The term ‘square words’ is given to words made from the **letters which occupy the square number positions in the alphabet**: A (1), D (4), I (9), P (16) and Y (25).

   The **longest square words** have 6 letters. Yapapi includes all the square letters except D.

   YAPAPI (= Yavapai, ‘people of the sun’) a Yuman tribe known as Apache Mohave and Mohave Apache, ‘hostile or warlike Mohave’, originally in W. Arizona.

2. Alternatively, the term ‘square words’ can mean **words having a square number total**.

   The **heaviest square word** has a total of 256 (16²) and 20 letters:

   AOUEATSIOUAENRONNONS (= Winnebago, ‘people of the filthy water’) a tribe of the Siouan linguistic family, originally found on Green bay in Wisconsin.

**FIBONACCI**

The term ‘Fibonacci words’ is given to words made from the **letters which occupy the Fibonacci number positions in the alphabet**

The Fibonacci number series begins 1, 1 (A), 2 (B), 3 (C), 5 (E), 8 (H), 13 (M), 21 (U)...

The **longest Fibonacci word**s have 9 letters:

BACABACHE (= Baca, ‘reed grass’) a Mayo settlement near Rio del Fuerte in N. Sinaloa, Mexico.

MACHACHAC (= Mequachake, ‘red earth’) one of the 5 general divisions of the Shawnee whose villages were on the headwaters of Mad R., Logan co., Ohio.

**PAIR ISOGRAMS AND POLYGRAMS**

1. **A pair isogram is a word with 2 of each different letter**:  
   SHESHELL (= Seechelt) a Salish tribe of B.C.
   WASAWSEE (= Osage) important Siouan tribe, originally along the lower course of the Ohio R.
   OTTOWAWA (= Ottawa) intertribal traders and barterers living on Georgian bay, French R.
   HAKOOKEEAH (= Acoma, ‘people of the white rock’) a tribe of the Keresan Family, N. Mexico.

2. **In split word pair isograms, the letters in the 1st half of the word are repeated in the 2nd**.

   Palindromes with an even number of letters, and tautonyms, are special examples of split word pair isograms. They are not included here. In the following examples, the letters of the two halves of the word occur in different orders:

   OTETOGE (= Oto, ‘lechers’) 1 of 3 Siouan tribes forming the Chiwere group(with Iowa & Missouri)  
   SONONS (= Sonomi, ‘place’) the name applied to the vicinity of what is the site of Sonoma, Calif.
   ATNATÁNA (=Ahtena, ‘ice people’) an Athapascan tribe occupying the basin of Copper R., Alaska.

   STOKTOKS a Squamish village community on Howe sd., British Colombia.

3. **A trio isogram is a word with 3 of each different letter**:

   CAACAC (= Caacat) a Chumashan village between Goleta and Pt. Concepcion, California.
4. a tetra-isogram is a word with 4 of each different letter:
ARRAARRA (= Karok, ‘upstream’) they have no name for themselves other than that of ‘men’ or ‘people’. Lived on Klamath R. from Redcap Creek to India Creek, California

PALINDROMES AND INTERNAL PALINDROMES

PALINDROMES
The palindromes in Hodge can be found in The Palindromicon 11 compiled by Jeff Grant and Dan Tilque, Word Ways Monograph Series 6, 2002. However, some of them have an accreditation other than Hodge. Those of the latter which have more than 3 letters are:
AKKA (= Makak) an Igkomiit Eskimo village on the Yukon River, Alaska
HOHO (= Hoh) a band of the Quileute in Washington
OTT (= Otö, ‘lechers’) 1 of 3 Siouan tribes forming the Chiwere group (with Ioway & Missouri)
TEET (= Tait, ‘those up river’) a collective name for the Cowichan tribe on Fraser R., B.C.
KIJIK (= Nikhik) a Knaakhokanaka village on L. Clark in Alaska
KOLOK (= Colok) a former Chumashan village east of Santa Barbara
NAZAN the village of the Aleut in Alaska
SANAS (= San) a central Texas tribe, apparently Tonkawan
SARAS (= Chereau) an important tribe, probably of Siouan stock, in Carolina
SIÑIS (= Zuñi) a Pueblo tribe, constituting the Zuñian linguistic family, living on the Zuñi R., Valencia co., N. Mexico
SOTOS (= Uzutiuhi) a Quiaipaw band and ancient village in Arkansas
YATAY (= Yatasi) a tribe of the Caddo confederacy living in a village on Red R. of Louisiana

INTERNAL PALINDROMES
These Internal Palindromes are palindromic sequences which form part of a word.
The longest internal palindromic sequences have 11 letters:
NAKAWININIWAK (= ‘men of divers races’) a mixed tribe of Cree and Chippewa on Saskatchewan R., N.W. Territory, Canada
OCAKAMIGAWININIWAG (= Oscheekamegawenewak, ‘people of the transverse ridge’) a former Chippewa band in Minnesota, living near Rainy Lake
GAMISKWAKOWININIWAK (‘men or people of the place of much red cedar’) a Chippewa band about Cass Lake, near the head of the Mississippi, in Minnesota

REPEATED LETTERS
Each of these words has 7 or more of a particular letter:
A x 8 MAMAKATAMASITAAK (= Siksika, ‘black feet’) an important Algonquin confederacy in Saskatchewan
E x 7 ONPOWERSEPEWENENAK (= people of death river) a former Chippewa band in Minnesota
I x 9 ANIBMINAHNISWINWINIWAK (= Pembina (crab) river men), a Chippewa band living on Pembina R. in N. Minnesota and the adjacent part of Manitoba
L x 7 HULLOOLEETELL (= Hullooetell) either a Chinookan or a Salishan tribe living on Cowelisske (Cowlitz) R. above the Skillot, and on Chahwahnaheooks R.
O x 7 NAGGOEOOKTORMEOOT (= Nagtoektomut, ‘horn people’) a tribe of Eskimo who summer at the mouth of Coppermine R., and winter on Richardson R., Mackenzie Ter., Canada
T x 7 KTHUTHMETSETTUTUN a former village of the Tututni on the Pacific coast N. of the mouth of Rogue R., Oregon
SEQUENTIAL WORDS

PALINDROMIC SEQUENCES

1. 3 letter sequences - palindromic triplets
   (a) Memnon words (2 palindromic triplets) - pattern 121.343 (see Internal Isomorphs above)
   (b) Agamemnon words (3 palindromic triplets) - pattern 121.343.565

AMAIKIARA a former Karok village on the bank of Klamath R., California.

2. at least one palindromic sequence greater than 3 letters:
   SUS.ANNA (= Busanic) a Pima settlement near the Arizona-Sonora boundary
   ILI.NESEN (= Illinois) a confederacy of Algonquin tribes, formerly occupying S. Wisconsin,
   N. Illinois and sections of Iowa and Missouri.
   ALLA.SIS (= Atasi, ‘warelub’) ancient Upper Creek town on Tallapoosa R. in Macon co., Alabama
   OTTO.AWA (= Ottawa) intertribal traders and barterers living on Georgian bay, French R.
   MONOM.ETE (= Manomet) a village of Christian Indians in Barnstable co., Massachusetts
   TANANAT.ANA (= Tenankutchin, ‘mountain people’) an Athapascan tribe in Alaska
   TOOTOOT.ANA (= Tutunune, ‘people close to the water’) a gens of the Tututni, above the mouth of
   the Rogue R., Oregon
   MAM.ILLI.AKA (= Mamalelekala) a Kwakiutl tribe on Village id., British Colombia

MIAMI SEQUENCES

CHICH.ASHAS (= Chickasaw) an important Muskogean tribe, originally in N. Mississippi

MIXED SEQUENCES

1. palindromic sequence + tautonymic sequence (and vv)
   OTTO.WAWA (= Ottawa) intertribal traders and barterers living on Georgian bay, French R.
   BIBI.ANA a former ranchiera, probably of the Papago, in N.W. Sonora, Mexico
   AHAI.AWA (= Amahami, ‘mountainous country’) a former distinct Siouan tribe later incorporated
   with the Hidatsa. Also village name. Lived at mouth of Knife R., N. Dakota
   HLUHLU.NATAN (= Ntlaklakitin, ‘the crossing place’) a village of the Lytton band of

2. palindromic sequence + Miami sequence (and vv)
   Ntlakayapamuk at Kanaka Bar, B.C.
   CAC.HICHI (= San Felipe) a mission village, probably on the lower Georgia coast
   KIK.ASTAS (= Crows) a Siouan tribe, part of the Hidata group. Formerly on the Missouri R.
   UCU.WUNWU (= Ushu) the Columnar Cactus clan of the Chua (snake) phratry of the Hopi
   CATAC.OUROU (= Tacatacuru) a river, an island and probably a village of the Saturiba tribe of
   N.E. Florida
   ATNAT.ANA (= Ahtena, ‘ice people’) an Athapascan tribe occupying the basin of Copper R. Alaska
   CHOCH.ITU (= Cochiti) a Keresan tribe and its pueblo on W. bank of Rio Grande, S.W. of Santa Fe
   MEAME.AGA (= Miami) an Algonquin tribe in Wisconsin \N. Mexico
   SHOSH.OKO (‘walkers’) a collective name attached to the poorer bands and individuals of the
   Shoshoni who did not own horses.
   TCATC.INI (= Chatcheeni) a camping place near the town of Kasaan, S.W. Alaska
   ANNAN.ETOOTE (= Anarnitung, ‘having smell of walrus dung’) a winter village of the Kingua
   branch of Okomiut in Baffin land

3. tautonymic sequence + Miami sequence
   WAIWALAIKAI (= Wiwekae) (see Bigrams above)
4. *palindromic sequences + ladder sequence*

TET.ONO.KANDANDAS (= Oglala) the principal division of the Teton Sioux

More sequential words from Hodge can be found in *Sequential Words*, WW2005003.

**TAUTONYMS AND INTERNAL TAUTONYMS**

**TAUTONYMS**

These tautonyms have *6 or more letters*:

- **BELLABELLA** an important Kwakiutl tribe in British Colombia
- **CHUKCHUK** a subdiv. of the Chnagmiut Eskimo & name of their village on Yukon delta, Alaska
- **KCIWUKCIWU** (= Kshiwiukshiwu) a former Chumashan village on Santa Rosa Id., California
- **KSHIWUKSHIUW** a former Chumashan village in California
- **NUTUNUTU** a Yokuts (Mariposan) tribe formerly living on the lower Kings R., California
- **OUALLASOUALLAS** (= Wallawalla, 'little river') a Shahaptian tribe formerly living in Washington
- **PSAUPSAU** (= Patau) a tribe, probably Coahuiltec, living N.E. of the Rio Grande & Oregon
- **QUIZQUIZ** a former town on, or near, the Mississippi R. in N.W. Mississippi
- **SINKSINK** (= Sintsink, 'at the small stone') a Wappinger tribe on the Hudson R., N.Y.
- **TAUSTRAWIS** (= Dooesedoewe, 'plover') a clan of the Iroquois
- **WOLLAHWOLLAH** (= Wallawalla, 'little river') a Shahaptian tribe formerly living in Washington
- **XOEXOE** (= Koikoi) a supernatural being living in ponds; used as a mask & Oregon

**INTERNAL TAUTONYMS**

These Internal Tautonyms are *tautonymic sequences which form part of a word*.

The longest internal tautonymic sequences have 12 letters:

- **TOOWEETOOWEE** (= Miami) an Algonquin tribe in Wisconsin
- **TCHIPANTCHICKTCHICK** (= Chippanchedickchick) a tribe, either Chinookan or Shahaptian, on Colombia R., in Klickitat co., Washington

**TRIANGLES**

The letters which make these 10-letter words occur in the ratio 4:3:2:1. The words can be shown diagrammatically with like letters in the same rows to make a triangle. Words with one of one letter, two of two letters, three of three letters etc., although strictly triangle words, have also been referred to as pyramid words in Word Ways.

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E N N O S Y
A A A W W T T
G G T T T A A A N N N H H
A A A E E E O O O L L L O O O A A A
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Note that these particular words all contain an *internal palindrome*.

- **GANEGANAG** (= Caughnawaga, 'at the rapids') an Iroquois settlement on the St Lawrence R. Quebec
- **TAEETEETAN** (= Tihittan, 'bark-house people') a Tlingit division at Wrangell, Alaska, belonging to the Raven phratry
- **TOOTOOTANA** (= Tututunne, 'people close to the water') a gens of the Tututni, above the mouth of the Rogue R., Oregon
- **WOLLAHWOLLAH** (= Wallawalla, 'little river') a Shahaptian tribe formerly living in Washington & Oregon
- **NOTONNOTOS** (= Nutunutu) a Yokuts (Mariposan) tribe formerly living on lower Kings R., Calif.
- **AHWAHHAWAY** (= Amahami, 'mountainous country') a Siouan tribe originally at the mouth of Knife R., N Dakota
WEIGHTS

These genres assign the letters their numerical positions in the alphabet, A = 1, B = 2 to Z = 26.

AVERAGE LETTER VALUES

The average letter value (a.l.v.) of a word is determined by dividing the numerical letter total by the number of letters in the word.

1. the word with the lowest a.l.v:
   BACA a.l.v. 1.75, a Mayo settlement in Sinaloa, Mexico
   2. the word with the highest a.l.v:
       ZUXT (= Zoht) a.l.v. 22.75, a village near Nicola Lake, British Colombia

BALANCED WORDS

Balanced words have an a.l.v. of 13.5, exactly half way through the alphabet. All balanced words have an even number of letters. The numbers in brackets indicate the number of letters in the word and the total letter value:

(4 - 54) SUMA semi-nomadic tribe with branches formerly in Chihuahua, Mexico & El Paso, Texas
(6 - 81) MOHOKS (= Mohawks, ‘man-eaters’) the most easterly tribe of the Iroquois confederation.
   They called themselves Kaniengehaga (‘people of the place of the flint’).
(8 - 108) TUTTELEE (= Tutelo) an eastern Siouan tribe formerly living in Virginia & N.Carolina
(10 - 135) KLUTAGMIUT (= Klutak) an Eskimo village in the Kuskokwim district, Alaska
(12 - 162) TUTTELEE (= Tutelo) a former village of the Chetco on S. side of Chetco R., Oregon
(14 - 189) TZISEKETZILLAN (‘twin peaks’) an Apache band at San Carlos and Fort Apache
(16 - 216) SHISHINIWOTSITAN (= Comanche) one of the southern tribes of the Shoshonean stock; the only one living entirely on the plains in Wyoming

The longest balanced word has 18 letters:
(18 - 243) ONNONTAGUEHRONNONS (= Onondaga, ‘on, or on top of, the hill or mountain’) an important tribe of the Iroquois confederation, formerly living on the mountain, lake and creek bearing their name, in Onondaga co., N.Y.

CENTURY WORDS

Century words have a letter total of 100.

1. The shortest century words have 5 letters:
   YOUTS (= Ute) an important Shoshonean division. in Colorado, Utah and N. Mexico
   YUTUM a Chumashan village between Goleta and Pt. Concepcion, California

2. The longest century words have 15 letters:
   CHIGABENNAKADIK (= Shubenacadie) a Micmac village and reservation at head of Shubenacadie
   R., N. of Halifax, Nova Scotia
   GAWABABIGANIKAK (‘place of much white earth’) a Chippewa band about White Earth Lake, N.W. Minnesota

HEAVIEST WORD

The heaviest word, appositely meaning ‘strong people’, has 25 letters and weighs in at 327:
TRENDJIDHEYTSETKOUTTCHIN (= Natsitkutchin, ‘strong people’) a Kutchin tribe inhabiting the country from Porcupine R. north to the Romanzof mountains, Alaska

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Last, but certainly not least (rather, ‘most’), the longest solid word in Hodge has 28 letters:
MEKADEWAGAMITIGWEYAWINWINIWAK (‘people of the black water river’) a Chippewa band formerly living on Black R., S.E. Michigan