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THE DAKOTAN LANGUAGES

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FROM

AMERICAN ANTIQUARIAN, JANUARY, 1882.

Chen-tale, 98.

FRED LOCKLEY
RARE WESTERN BOOKS
4227 S. E. STARK ST.
PORTLAND, OREGON



THE DAKOTAN LANGUAGES, AND THEIR RELATIONS TO OTHER LANGUAGES.

BY A. W. WILLIAMSON.

To the ethnologist and to the philologist the Dakotas and those speaking kindred languages are a very interesting people. There are four principal Dakota dialects, the Santee, Yankton, Assinniboin and Titon. The allied languages may be divided into three groups:

I. a, Winnebago; b, Osage, Kaw, and 2 Quapaw; c, Iowa, Otoe and Missouri; d, Omaha and Ponka.

II. Mandan.

III. a, Minnetaree (Minitari) or Hidatsa; b, Absauraka, or Crow.

Pawnee and Aricaree seem also to be somewhat related.

In my father's opinion the Dakota dialects differ about as much as the Greek dialects did in the time of Homer, and the Assinniboin is much nearer to the Yankton dialect of which it is an offshoot than is the Titon. Judging by the vocabularies to which I have access chiefly in Hayden's "Indian tribes of the Missouri," I would suppose the first group to differ from the Dakota about as much as the German from the English, and to differ among themselves somewhat as Hollandish, Friesian, and English. The Mandan appears to be separated much more widely from them than they are from each other. The Minnetaree and Crow constitute a distinct group diverging from each other more than the Santee and Titon, the extreme dialects of the Dakota. They show more resemblance to the Mandan than to any other one of the class, but diverge very widely from it. But very few words approximate identity. About one half of the words in Matthew's Hidatsa dictionary appear to me to be in part at least composed of material related to the Dakota, and about five per cent to fairly represent Dakota words. Many of these show little similarity except as compared in the light of sound representation.

When first discovered the Dakotas and Assinniboins were nomads, living almost entirely by hunting and fishing. The Dakotas, then probably less than ten thousand, are now more than thirty thousand in number. There are probably about three thousand Assiniboins. The allied tribes, except the Crows, when first found lived chiefly by agriculture. They have during the last hundred years rapidly diminished in numbers, and do not number over twelve thousand including the Crows.

All of the Dakotan tribes and some others formerly made

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and baked pottery similar to that found in the mounds of the Ohio valley. The Osages and some others lived in earth houses, whose ruins are similar to those of the houses of the mound builders. The Minnetarees, Mandans and Aricarees still live in houses of the same kind, and make and bake pottery. Measurements indicate that the crania of the Dakotas in size of brain and angle decidedly approach the European form. The cheek bones of the Dakotas are much less prominent than those of the Chippewas, and those one-fourth Chippewa and three-fourths white have on an average darker complexions than those half white and half Dakota. Among the Minnetarees and Mandans are many persons of light hair, blue eyes, and tolerably fair complexion, not attributable to an infusion of Caucasian blood since the time of Columbus.

No people take more pains to speak their language accurately than the Dakotas. Their social condition is similar to that of the Arabs, whose language has within historic observation changed more slowly than any other. The Assiniboins have been separated from the Dakotas about three centuries, perhaps a little less, possibly much more. During all this time they have been entirely separated, associating wholly with tribes speaking languages entirely different, and yet their dialect remains almost identical with the Yankton. We are then encouraged to believe that their language has not changed so rapidly as to obliterate traces of its origin.

So far as I have been able to ascertain them the most important features characteristic of the Dakotan languages generally are the following:

I. Three pronominal prefixes to verbs, i, o and wa. I, this, forms nouns of instrument. O forms nomen actionis, etc. Some Crow and Minnetare words seem to indicate that its original form was a. Wa, meaning some or something, prefixed to transitive verbs makes them intransitive or general in their application. Wa is in Min. ma (ba, wa), in Crow, ba. Scantiness of material prevents me from more than inferring the existence of these and other prefixes in the other allied languages, from a few words apparently containing them.

II. A system of verbal prefixes used to form verbs from certain stems, regularly varied in signification, according to the prefix used. The Dakota has seven of these prefixes. The Min. has three of these almost identical in force. I should suppose that I would, with as much material, find greater similarity in the other languages, but the only one I have been able to trace at all generally is Dak yu. This merely converts the stem into a verb without changing its meaning. Dak y is nearly always represented in the allied languages so far as I

have observed by r, d, l or n; so that I find it in Min. du (ru, lu, nu), Iowa, Mandan, and Crow ru, Omaha ra.

III. A reflexive pronoun-tawa, Min. tama (tawa, taba), Iowa tawe, Osage tabe, forming from possessive pronouns double possessives, related to their primitives somewhat as mine to my. In some features of structure the Dakotan languages present an amazing diversity.

According to Powell (Int. to stud Am. Lang.) a Ponka in order to say "a man killed a rabbit," would have to say "the man, he, one, animate, standing, in the nominative case, purposely, killed, by shooting an arrow, he, the one animate, sitting, in the objective case." "For the form of the verb to kill would have to be selected, and the verb changes its form by inflection, and by incorporated particles, to denote person, number and gender, as animate or inanimate, as standing, sitting or lying."

On the other hand the Dakota could not vary the form of the verb to denote any of these things except number, with reference to either subject or object. He would probably say: "Wichasta-wan mastincha-wan kte,"—"man-a, rabbit-a, kill,"—in which each word is about synonymous with its English equivalent, and case as in English denoted by position. If he wished to show that the action was done by shooting, he would probably not vary the form of the verb kill, but would use the verb kute, meaning shoot whether with arrow or bullet. Except that the Dak. order corresponds to the Icelandic the only difference in structure between the Dak. and English expression is that the Dakota word kte may mean any time, the particular time being indicated whenever desirable in all cases in Dak. as mostly in English by auxiliary verbs and adverbs. If the word man were represented by a pronoun the Dak. would be still more analytic, since its pronoun would indicate any actor, male or female, or inanimate, unless it were desirable to distinguish, in which case the distinction would be made by compounding the pronoun with a suitable auxiliary word. In this feature, often given as characteristic of American languages, is a variation the greatest possible between two languages closely related. It is also worthy of remark that the Minnetaree, which I should suppose the most analytic of the group next to the Dakota, is one of those that least resembles the Dakota in vocabulary. Some of the features often assigned as peculiarities of American languages were according to Bopp and Schleisher features of the I. E. languages in their earlier stages. Of most other features said to characterize American languages I find in Dak. but faint traces. The Dak. *does have* verbs nearly synonymous with *go, walk, eat, drink, strike, etc.* It is well sup-

plied with purely copulative verbs. It has differentiated the various parts of speech even to the definite and indefinite article. It is sufficiently supplied with nouns denoting genera and classes. This is not a feature of recent development. A much smaller proportion of general than of special names have lost trace of origin.

The Dak *does not* have inclusive and exclusive plurals, etc. It *does not* have a multiplicity of verb forms to denote mode and tense, but when necessary does denote them with elegance and precision, by auxiliary verbs and adverbs, very much as we do in English. The Dakota is not made up chiefly of very long words. On the other hand it uses a great many little particles and connectives to express fine shades of meaning, wonderfully reminding one of the Greek. It fully agrees with other American languages in its wonderful facility for forming derivatives. The I. E. languages in their earlier stages possessed equal facility.

As a matter of fact we know scarcely anything concerning the structure of American languages aside from the Algonquin and Iroquois groups, and a very few isolated languages. They have been classified, in fact, almost entirely by examination of scanty and not very accurate vocabularies. In investigating the relations of the Dakotan to other American languages we are therefore compelled to base our conclusions chiefly on vocabulary. I once resided a year among the Chippewas, and in various ways have had much better opportunities of comparing the Dakota with the Chippewa than with any other American language. I have not been able to find a word alike in the two; and but very few words even slightly similar in sound and sense. In pronouns few languages in any part of the world are so strikingly contrasted. If I were to attempt an argument for original affinity between Dakota and Chippewa my argument would be that so great dissimilarity could not be the result of accident. Aside from the Cheyenne an Algonkin language, which has incorporated some Dakotan words, and the Pawnee group, the similarities east of the Rocky mountains are surprisingly few, though the Huron, Iroquois and Mobilian languages do not seem quite so strongly contrasted as the Algonkin. Among the Eskimo, the tribes of the Pacific Slope, Mexico, Central and South America, we occasionally find identical and not infrequently similar words. In some the resemblances seem remarkable considering the size of the vocabulary. Closer examination shows however that they are not of a kind to indicate a special relationship. They are almost exclusively confined to a few pronominal bases of very wide diffusion, and the following: 1. a'a, tata. 2. papa, each meaning

father; 1. ana, nana; 2. ma, mama, each meaning mother. As an example I take the base ata, tata. Dakota, ate (dialect ata); Minnetaree, ate, tata, tatish; Mandan, tata; Omaha, ad, dadi; Ponka, tade-ha; Aricaree, ate-ah; Pawnee, ate-ish.

Tuscarora ata; Cherokee e-dauda; Eskimo—Greenland ahtata, Aleutian ata, California, San Miguel tata; Mexico Aztec teta; Otomi, ta, te; Yucatan, Cakchequil tata; Central Am. Tarasca tata; Darien tauta; Eastern Peru, Mossa tata; Western Paraguay, Villela tata.

Congo Western Africa, tat, tata.

Japan dialect tete; Chinese dialect tia.

Turko Tartar, Turkish ata; Tatar ata, atha; Kunan atta; Kasanish, Orenburg, Kirgis ata; Samoyedic dialects, Eastern Russia and Western Siberia ata, atai, atja, tatai; Finno Hungarian, Lap attje; Hungarian atja.

Caucasus, Kisti dada. Basque (Pyrenees Mountains) aita.

Indo European: Sanskrit ata, tata; Hindustanee dada; Latin, atta, tatta; Greek atta, tatta; Albanian, Albania, at, atti; Calabria and Sicily tata; Celtic, Welsh tad; Cornish and Bret tat; Irish, daid; Gaelic daidein; English (according to Skeats of Welsh) dad, daddy; Old Slav, tata otici; Moldavian tata; Wallachian tate; Polish tatus; Bohemian, Servian Croatian otsche; Lithuanian teta; Preuss thetis; Gothic ata; Old Fries tate; O. H G tato; Old Swed atin; Swed island Runoe dadda.

In fifty-nine of the one hundred and forty-six versions of the Lord's prayer given by Adélung in the Slavonic, Lithuanian and Teutonic families, the word for father is from this base. Atta is the form used in Ulfilas Gothic version of the fourth century, the oldest Teutonic relic.

Papa and mama in Dak, as in I. E languages, occupy a subordinate position, having about the same scope as in Latin and Greek. Words apparently related to these are rare in N. A. languages, but frequent in S. A., African, Malay Polynesian and Turanian languages. The Semitic aba, etc., is perhaps related. The base ana, nana (Dak ina), though not very much used in I. E languages appears to be more widely distributed than any of the others.

All the Dakota pronouns which show much similarity to other American forms are representative of Fick's I. E bases, and appear to be widely disseminated. Adélung and Latham do not however give pronominal forms in as many languages as they give words for father and mother, and I cannot so well determine their distribution.

Professor Roehrig, in his able paper on the Dakota, points out some very interesting analogies to Turanian languages. Others might be added. These similarities are chiefly in fea-

tures common to I. E. and Turanian. On the other hand the Dakota shows on the surface striking contrasts to Turanian languages. The numerals are eminently dissimilar. The Dakota, like I. E. languages, varies both root and suffix in forming words, and uses both prefixes and suffixes. In Turanian languages the suffix only is varied, and prefixes are scarcely at all used.

It seems to me therefor that it is not unscientific to inquire whether the similarities of the various Dakotan languages to various European languages, modern and ancient, so often remarked are or are not accidental. It is very easy to see that the Dakota resembles the English in vocabulary much more than it resembles the Chippewa. The similarities of the Dakota suffixes, pronouns and prepositions to those given by Bopp, and the general resemblance of Dakotan languages to Sanskrit, Gothic, etc., in vocabulary, made me certain of relationship before I ever saw Fick's dictionary. Yet as I turned over his pages I was amazed at the similarity of the I. E. roots to the Dak roots. The Slav Teut bases of Fick seem to me most similar to the Dak. I am certain that neither the Teutonic or Graeco-Italic dictionaries resemble the Dakota as much as do the European, Indo-European and Aryan dictionaries. The I. E. consonants are represented in Dakota, Santee and Titon dialects, and in Minnetaree in accordance with the following table. I omit representatives concerning which I am doubtful. I have too little material on the other languages to justify me in including them.

I E	k	g	gh	p	bh	m	w
S	k, h, kh, sh*	k, h†	gh, kh, zh	p	m, b, w	m	w, p
T	k, h, g†, khsh	k, g†	gh, kh, zh	p	b, w	m, b†	w, p
M	k, h, gh , sh	k	gh	p	m§ (b, w) p		
I E	t	d	dh	n	r, l¶	y¶	s
S	t, n	t, d, n	d	n	n, d	y, z	s, sh, z, zh, t
T	t, n	t, l, n	l	n	n, l	y, z	s, sh, z, zh, t
M	t, d	t	d§ (l, n, r)		ts	ts, sh,	t

* Chiefly, probably not always, for Fick's second k, Lith sz (pron sh), Slav s. The k's and g's liable to labialization in Eu. languages appear to be occasionally labialized in Dakotan languages.

†In S. hd, Yankton kd, T. gl; S. hn, Y. kn, T. gn or gl; S. hm, Y. km, T. gm.

‡In S. md, Y. bd, T. bl.

¶In a previous paper I represented this by kh; and do not know whether it is nearest Dak kh German ch, or Dak gh; I E gh.

• Santee d always becomes l in Titon.

• Dak y becomes r, d, l or n in the allied languages, except perhaps the Osage, and perhaps in part represents I E r.

§In Minnetaree m, interchanges so freely with b and w, and d with l, n, and r, that Matthews represents each group by one letter. The same irregularity occurs largely in Crow, and somewhat also in Mandan.

Ch as in chin very often occurs in Dak as a euphonic modification of k. Otherwise it stands chiefly for d, r, l, n of the allied languages. On the other hand Win and Iowa ch usually represents Dak, and I E t. R is found in all the allied languages, and in Winnebago is more frequent than even in Icelandic. Iowa aspirate th, represents Dak s, and other sibilants. Hayden does not distinguish the subvocal and aspirate th in Omaha. From a small list gathered by my father I judge that the aspirate is probably similar to the Iowa, and that the subvocal represents Dak and I E dentals. F in Iowa represents some Dak p's.

There is wonderful regularity in the sound changes in passing from Santee to Titon Dak, and so far as I can yet discover great irregularity in passing to the allied languages. Possibly fuller materials and closer study may reduce the changes to system.

Dak proper has but five vowels; a and e represent I E a; i, i; u, u; and o, either u or a. They are weakened as in I E languages, and suffixes which raise I E vowels raise i and u to a. The allied languages have a larger number of vowels, the Minnetaree ten.

VERB STEMS.

The reduplication of roots in Dak as in I E is extremely frequent, in both, as in other languages, developing iteratives which occasionally become intensives. The reduplication of Dak words is like Skt of but one syllable, usually but not always the root.

The suffix 'a, aya, which formed verb stems of I E roots usually becomes a, e, i in Dak as in old Eu. languages.

Ya seems to be rarely preserved: I E pak cook, Skt papakaya parch; Dak papakhya parch; I E agh say, Lat ajo for aghya say; Dak eya say. The Dak has many relics of the n of suffix na, which worked its way before the final consonant; I E tag touch whence I E tang, Lat tango; Dak tan touch. There seem to be relics of the other methods, which were however so closely akin to methods of forming nominal stems that they need not be discussed here.

Schleicher gives two methods of forming secondary verb stems: by suffix sa forming frequentatives; by suffix ya cause to be, forming transitive verbs from verbs, adjectives and nouns. Both are living suffixes extremely frequent and having the same force in Dak.

NOMINAL STEMS.

As in I E a few Dak roots either single or reduplicated form nomen actionis, etc. This similarity is too widely spread to be of value. It is far otherwise with suffixes, which are in a majority of cases usually representative of one or more of Schleicher's twenty suffixes, and if otherwise at least derived from I E roots, excepting a few of obscure origin.

1. I E -a formed from roots, adjectives, also appellatives, and abstracts, of which the Dak has many relics: I E stag, Teut stak strike beat; Dak staka beaten, broken; Slav. Teut kak sound; Dak kaka rattling; I E pu stink, rot; Min pua stinking, rotten; Eu sap understand; Lat sapa wise; Dak k-sapa wise.

Slav Teut kak cackle, kaka the crow; Pawnee kaka; Man keka the crow; Eu sara stream flow, sara butter; Min tsara; Tit Dak sla grease; I E ar join whence our arm; Win and Min ara, the arm; Slav Teut lap, lamp shine; Dak ampa light; Slav Teut krup-fear; Dak kopa noun fear, a fearful place; adj insecure; a Scandinavian base naf, nap, our nab, Icel nefi; Swed nefwa (perhaps i was the original suffix) the hand; Dak nape the hand; I E kak spring; Lith szaka (pronounced shaka) twig shoot, etc; Dak shake nails claws; Om shage finger; Min shaki hand paw.

In Dak as in I E -a usually raises the stem vowel; I E kid burn; Teut haita hot; Dak kata hot; I E sik dry; Dak saka also shecha dried; I E lip adhere; Tit Dak lapa sticky adhesive; I E migh pour out water, Skt megha cloud; Om magha, mangha cloud sky; Crow makha sky; Dak in mahpiya (maghapiya) cloud sky, maghazhu rain. The zhu is Dak-zhu, Min-ghu, I E ghu pour.

2. I E -i formed abstracts and nouns of agency: I E ar go: Min ari, way, track, trail.

3. I E u formed adjectives; I E ragh spring, raghu light, whence lungs; Min dagho, agho; Dak chaghu lungs;* Eu park whence parka wrinkle; Dak pako crooked, wrinkled.

4. I E -ya formed nouns, adjectives and participles. The Dak still retains some adjectives thus formed, and hundreds of participles rendered by English participles, but used only adverbially, and it has become an adverbial suffix.

5. I E -wa formed passive participles, adjectives and nouns. It is in Dak a living passive participial suffix combined with the like suffix -an, forming wa(h)an. When added directly to the root it raises the stem vowel as in; Eu ku contain to be hollow; Lat cava; Dak -ko be hollow, noun ko a hole; kawa open. After consonants the w becomes p; I E akwa water of ak; Gothic ahva river; Dak wakpa river.

6. I E -ma, -mana, -man formed adjectives, present participles and nouns; I E akman stone of ak, A S iman; Dak imni stone.

7. I E -ra; -la formed adjectives and nouns; Eu kira yellow; Old Slav seru; Crow shira, Min tsidi, tsiri, Man psida, Iowa thi, Om thi, zi; Win and Dak zi yellow; I E ghu pour; Min ghu pour; Dak zhu pour, ozhu pour in, in ozhudan, Tit ozhu la full; Eu wasra spring of was; Icel vara, Lat ver; Win wera spring; Eu tag cover whence; Welsh and Irish ti house, our thatch; Win chira house; Man, Min, Om, Dak ti house; Aryan nira water of ni; Tit Dak nila water; Om and Win ni water.

Ra, la is also a diminutive suffix in I E languages. It is the regular diminutive suffix in Win, -ra, in Tit Dak, -la, in Yank -na, in Santee Dak -dan also -na.

8. I E -an formed past passive participles whence our en in fallen, etc. It is still the regular passive participial suffix in Dak either alone or combined with wa. As Dak verb stems end in a vowel it is preceded by a euphonic h. When added directly to the root it raises the stem vowel, as in Eu wik whence Gothic veiha holy; Dak wakan sacred.

9. I have not found infinitive suffix -na in Dak.

10. I E -na was a passive participial suffix, developing also denominatives. The Dak has perhaps a few relics; I E ku bring low, kauna low; Dak ku- in kucedan, also kun low. I E mi, diminish (mince); Yank and Tit Dak mina knife.

11. I E -ni formed abstracts and nouns of agency. Possibly it is found in; I E migh pour out water; Dak mini water; and a few others.

*For I E r—Dak ch compare En wira Dak wicha -man; Eu wera; Dak wicaka true. Tent legya thigh whence leg of lak; Win lega and legra; Iowa reke; Mandan doka; Min diki, liki the leg, the thigh; Dak checha the thighs. The r probably first became d.

12. Two words containing -nu, are recognized by Schleicher as I E; I E and Dak su bear; I E sunu son; Dak sun younger brother. I E and Dak tan extehd; I E tanu adj thin, noun body; Dak tan body.

13. I E -ta (our -d) formed the past passive participle, and nouns of similar signification, in which uses it is tolerably frequent in Dak; I E ski collect, arrange; Dak shki plait gather, skita bound together tied on; I E pu destroy rot; Min pu rot; Dak po in pon (=po an) rotten, po -ta used up, worn out; I E sta stand, stata standing, stopped, brought to a stand; Dak -sdata standing, stopped, hence also sdata feeble; I E su sew, sut. sewed; Dak suta strong, compare Min ashu a string cord; I E and Dak wi wind, wrap around, encircle; Dak wita island; wita bound together, in witaya together.

14. I E -ta, formed nouns of agency and future participles. It is derived by Bopp from I E tar pass-over, whence also Eu tar, tur pass-over, possess, accomplish, fulfil. The root is extremely frequent in these uses in the Dakotan languages, and in Dak at least is much used as a suffix. The last half of the word Mini-tari is tari, cross over. In Dak, Eu tar is represented as accurately as possible by ton possess, accomplish, fulfil, have, give birth, and the preposition tan in composition from equally represents Skt tar, from.*

As forming nouns of agency it has in Dak lost the r; Eu pa, whence Eu pana fire; Dak peta fire; I E ak Skt iksh see, whence our eye; Min aka, ika see; Crow am-aka, Iowa at-aka see; ishta eye, in all Dakotan languages.

We perhaps have a few relics of tar as a comparative suffix; I E uk increase whence Old Sax agen our again; Mand age, Dak ake again, Dak akton more than.

15. I have not recognized -ti in Dak.

16. Dak wetu, etu time, season, may be I E and Dak, -wi encircle, with -tu, but is more probably related to I E vatas year, adj. old.

17. I have not recognized -dhi in Dak.

18. I E -ant (our ing) forming active participles necessarily drops t and prefixes h in Dak, and in this form, han, is used as active participial suffix with some verbs.

19. As a plural suffix I E -as seems to be presented by the Mandan plural suffix osh.

20. I E -ka as a primary suffix forms a few nouns and adjectives; I E ku contain be hollow; Dak root ko the same, koka a cask, barrel, box, etc; I E and Dak tan extend, stretch; Dak tanka large (cf Iowa tanra large). I E da bind; Dak daka

*Dak n-I E r is supported by about fifty examples.

bound by obligation, relationship or league, whence their name Dakota, those bound by league, those making a league, friend, comrade (-ta for I E tar). As a secondary suffix it is extremely frequent in Dak as well as I E, forming in both words of multifarious relations to their primitives. I E kuan, kwan, kwanka dog; Lith szun (pronounced shun); Dak shunka dog; Old Slav suka a bitch; Min shuka a dog. Ka is used both in I E and Dak as a negative suffix. In Sanskrit and several other I E languages it is used as a diminutive suffix, and forms one syllable of the various Min diminutive suffixes.

PREPOSITIONS.

The Dak is like the I E languages remarkable for its copiousness in prepositions. In their use or omission the Dak differs from the English less than does the Anglo Saxon. As in some of the old I E languages they are either verbal prefixes or follow their nouns. Nearly all of them seem to be of I E prepositions mostly compounded. I give examples of the more obvious similarities.

Sam. together with, in skt. A. S. and Dak.

En in, Greek, Teutonic and Dak.

On, A. S. with dat, for, on account of, of, Dak the same.

A verbal prefix on, Icel, A. S., Dak.

I E ana A. S. an on, Dak an in composition on.

A. S. at our at; Dak ta at necessarily transposed.

Eu da Old Ir du, our to, Germ zu; Min du, during, at that time; Dak tu to, till etc.

Eu ek over, of I E ak; Min ak over, Dak in ak -an upon, ak -am beyond over upon, ek -ta at, etc.

Eu api about, around; Min api with.

Eu ambhi about, around, over; Dak am in akam over upon; A S and Ger um. Swed om same meaning; Dak om with, used with plural object only.

A S ni negative; Dak ni prefix in nicha none and base of negative words in shni not combined with reflexive sa.

PRONOUNS.

The Dak and Algonkin pronouns are amazingly dissimilar the Dak and I E are remarkably alike.

1st person sing. inflection, ma, mi, m, in I E and Dakota. The Dakotan forms are however oftener prefixed than suffixed eg; Dak root ha have (Teut aih own) yu formative prefix, 3 yuha he has; 2 duha thou hast; 1 mduha I have; Titon 3 yuha, 2 luha, 1 bluha.

1st p stem. The ga of Lat ego A S, ic etc. appears in Iowa, ka, ke, etc. The chief base of nearly all the Dak languages is

however, ma, mi, corresponding to I Ema, mi; Lat me, mi; Eng me, etc.

1st dual and Plural stem. I E na, Lat no, Mandan nu; Teut dual onki, Goth ugki, A S unc, Dak unki and un. The base wa whence we, has become in Dak wa I, in Omaha wi me, in Iowa inflection pi-ural wa, us, etc.

2d. I E twa has become in Dak ni (cf Swed ni thou). It is however in Omaha thi identical in sound with our thee, and da, di in most allied languages similar to German du. Dak ya pl yapi you, and our you are probably also of this base. The Iowa forms the possessive of personal pronouns like the Icelandic by -r; Icel min my; Iowa min my.

3d person, I, he, she, it, extremely frequent in I E languages, is the base used in all the Dakotan languages as least partaking of a demonstrative nature. In Dak it is omitted except when emphatic.

I E sa reflexive and emphatic; Min she, the same. Contracted to s it forms I E nominative; in Dak, as sh nominatives of i (ish), mi, ni and unki, and occurs in composition; in Min it forms proper names.

I E sa, ta, Teut tha, this, that; Om the, this; Dak ta, to in many compounds.

I E sawa genitive of sa, ta reflexive possessive for all persons; Dak tawa the same, also ta. It is in the third person used alone in Dak, but suffixed to i in Minnetaree. All its forms in Min, and those of the first and second persons in Dak are double possessives analogous to mine, thine.

Eu ki, kina, that, this, he, she, it; Dak ki, his, her, its, etc. In Nom kana those, etc.; sing ka that, the vowel is raised as in the Greek keinos. For abridgement of stem in singular compare our ox, pl. oxen, Nortumbrian oxena, and other relics of stems in na; Teut hina this; Crow hina this.

From kina, hina, originated the Icelandic and Swedish past-positive def, article the; likewise Dak kin postpositive def, article the; ke emphatic pronoun kuns, clf, etc. Of this base A S stem he, he, she, it; Dak he (pl hena) he, she, it, that.

Slav Teut da this; Dak de (pl dena) this.

I E antara other; Mandan ant that.

I E i demon, pref, this; Dak i.

I E a dem. pref; Min a, o; Dak o.

I E wa pronominal base used in compounds; Dak wa pronominal prefix some, something. Prefix wo (wa-|-o) forms abstract nouns and nouns of agency.

I E ka int. and rel. pronoun; Pawnee ka interrogative; Dak ka interrogative suffix and in compounds; Ger wer; Dak

tu-we who int. and rel; Gk po; Min tape who, tapa or tako what. I E neuter base ku what; Dak ta-ku what rel. and int.

I E wika all the whole; Dak wicha them, incorporated objective. Iowa wi; Dak pi plural suffix seems to be a contraction of this base.

Analogous to A S, accusative mik of ma-|ga we have; Dak accusitive michi, in which the k has become ch through the influence of i; also the accusatives unki-chi, ni-chi, i-chi.

NUMERALS.

I have compared the Dakotan numerals with all others accessible to me, including some of the forms of more than five hundred dialects. I can find less than half a dozen American or Turanian sets that resemble any Dakotan set as much as the English numerals resemble the Hebrew. The similarity of the Dak to the I E numerals can therefore be accounted for only as the result of special relationship or of accident. Except as noted below all changes are in accordance with well sustained laws.

1, A S an, Lith (w) ena; Dak (w) -an, ind. article wanzhi one, wancha one, once.

2, I E dwa; Min d(o)pa; Iowa n(o)wa; Dak n(o)m pa cf A S ta two; Dak ta a pair.

3, I E traya; Iowa tanye; Dak ya -mni [or ya (m) ni?]

4, I E k-atwar; Iowa towa; Dak S topa; Y tom; T tol.

5, I E kankan, kwankwan; Mand kikhun; Dak zaptan?

6, I E kswakswa; Win hakwa; Iowa shagwa; Dak shakpe.

7, A S seowon; Dak shakowin.

8, I E aktu, Gk hokto; Dak Y sh-akdo-ghan; Sant sh-ahdo-ghan.

9, I E nawan; Dak na (pchi) wan-ka.

10, I E dwakan; Lat decem; Dak wikchem-na.

5, I E k = Dak z otherwise sustained but not proved. Kw = kp = tp = pt, t and k being interchangeable before labials in Dak.

7, Neither A S seowon nor Dak shakowin are legitimtelay deducible from saptan. Perhaps sakan, sakwan was the true base.

8, Either Gk h or Dak sh may equal I E s. Dak d for I E t is rare but S. hd, Y. kd is a favorite combination.

9, I cannot explain inserted pchi.

10, In Dak m and n are interchangeable before labials, but m for I E n is here unsupported.* D cannot stand before w in Dak.

*Whitney Skt Gr 487 appears to regard m, as in Latin decem, the original nasal.

VOCABULARY.

The table of sound representation heretofore given serves to compare the materials of the main body of the Dak with Fick's I E bases. The results are, however, in many cases ambiguous. Besides the number of accidental resemblances of the Dakotan to the I E languages seems, to be much greater than the whole number of similarities between Dakotan and Algonkin languages. Dak anapta is identical with I E anapta in sound, closely similar in meaning. Dak a-na-pta is prep. a=Icel a on, na prefix converting root to verb, and pta separate; c f I E pat fall, also open (Lat pateo). I E an-apta is an negative prefix, and apta participle of ap attain. My father compared Dak chepa fat with Lat adeps. I have since found Min idip. fat almost identical with Lat stem adipi. I E and Lat d and p are nearly always d and p in Min; but it is extremely doubtful whether the words are related. On the other hand there is little apparent similarity between Eu karpya shoe, and Dak hanpa shoe; but the Dak word represents the Eu as accurately as possible; similar forms are found in every Dakotan language, and it seems scarcely possible to me that the similarity can be accidental.

In giving a few additional examples of similar roots I select those that are the most obvious, rather than the most certain. I exclude those not in accordance with sound representation, and the analogies of such allied Dakotan and I E forms as are known to me.

Where the Dakotan forms are not used as separate words it is indicated by a hyphen, before, if used alone as a verb stem, after if it requires suffixes. Where the root is found primarily combined with only one suffix or prefix the derivative form is given. In some cases the Dak root has one of the meanings given in one combination, another in another.

Eu i go; Dak i go.

Aryan u mangle; Min u wound; Dak o.

Eu ak tell, relate; Dak o(y)-aka.

Eu aka mother; Min ika mother.

Eu ap attain; Dak ape wait for, expect.

Eu ad; Icel eta eat; Dak ta eat.

Eu as be; Ital, Alb, Pers e is; Dak e is, -esh. be it so.

Eu as mouth, asta lips; Dak i mouth, ishti the under lip.

Eu unk dwell; Dak un dwell, be; unkan be, unkan and, (act part for unkant continuing.)

Eu ka bend, curl, kak (for kaka) laugh; Min ka laugh; Dak kha bend, curl, i-khakha laugh.

Eu kak be injurious, Gk kakos bad; Mand khekosh bad; Crow kawi bad; Dak shicha bad?

Eu ka and; Dak ka and.
I E ka, kan, kar desire; Dak kon desire.
I E ka, kar, gar honor; Dak kan honor.
I E ka, ga know; Min eke know; Dak ka mean, signify.
Eu ka pierce, cut in; Dak ka dig.
Eu kat cover; Dak o-kati, o in, kati cover.
Eu kap take hold of; Dak yu-kapa catch as a ball, kapa sur-
pass.
Eu kam; Teut him bend, curve, arch; Dak S-hmi, Y-kmi
curve; S hmi-hma, Y kmikma round.
Eu kas rub against, scratch; Dak kashe rub against, kaza
pick to pieces.
Eu skar, kar shave off; Dak ka strip off, as the feather part
of a quill.
Eu ki, gi possess by force; Dak ki take by force.
Eu ki, kit seek; Dak a-kita seek.
Teut han waver, hang; Dak -han hang, totter, waver.
Teut haf lift, heave; Dak -ha lift, heave.
Teut hata hate; Dak -hiti hate.
Teut hama the hull; Dak ha the hull.
Teut hiwan related of the same family. Icel hjun household;
O. H. G. hun both husband and wife; Dak hun- of the same
family, also hun mother.
Teut kan, kin beget, germinate; Goth kuni related; Dak ku
suffix kin, root ku-, kin-, chin- in many derivatives. Goth
kwino woman; Dak wino.
Eu gha open out, whence gate, gape; Dak -gha, ghapa,
ghata open out.
Eu ghagh move convulsively; Dak gheghe swing the arms
like a drunken man.
Eu ghans; goose; Win wighanna, Mandan mihan, Dak
magha goose.
Eu ghans be rough; Min -gha, Dak kha be rough.
Eu tap press; Min tapi press; Dak -tpa.
Eu tarp satisfy; Dak tpa satisfying, etc.
Eu tan thunder; Dak o-tin thunder.]
Icel taka take, touch, fasten; Dak yu-taka take, touch, na
-taka fasten.
Eu da know, dak show, suppose; Dak da, daka think, re-
gard, have an opinion.
Eu da give; Dak da ask.
Eu di go, hasten; Min di go, travel.
Eu du go forth; Dak du-za run.
Eu dup sink in, our dive; Dak dopa mire; Min dipi bathe.
Eu nu now; Dak i-nu suddenly, na-ka now, wan-na now.

Eu nar man; Om no, nu man.
 Eu pak, Gk pakto- bind; Dak pakhta bind.
 Eu pat press; Min pati press.
 Eu pat fill up, crowd; Dak in pta-ya together.
 Eu pa swallow nourish; Dak- pa -nourish papa the nourish-
 ment, Min pe swallow, take nourishment.
 Eu pap swell up, puff out; Dak popa swell burst.
 Eu par divide (our part); Dak a-pa a part.
 Eu pi hate; Crow -pi hate.
 Eu pik pierce; Min pi tatoo, -pi pierce.
 Eu pu dry; Dak pu- dry.
 Icel fok our fog; Dak po fog, mist, steam, etc.
 Icel finn, Swed, Nor, M. H. G. fin, Dan, Sax finn, O. Du finj
 M Eng fine; Win pin, Dak -pi, Iowa pi good, perfected.*
 Eu bub (of bu) make a noise; Dak -bu make a noise, bubu
 noisy.
 Teut and Ir bata boat; Min mati, bati, Cr bashe, Dak wata
 boat.
 Teut blas flame, our blaze; T Dak bleza clear, transparent.
 Lat and Gr bison from Teut; Crow bishe the bison; dak pte.
 Lat and Gr mamma the mother breast; Dak mama the
 mother breast.
 Eu man remain; Dak man remain, stay.
 Sclav Teut-man go, step; Dak mani walk.
 Eu magh grow; Ir magh field; Dak magha field.
 Teut marka limit, boundary, territory of a tribe; Dak maka
 the ground, the earth, makoche country.
 Eu ya go; Dak ya go.
 Eu rup break; Min dupi, rupi break.
 A S throte the throat; T Dak lote, S dote throat.
 Eu wak say, speak, wad speak, sing; Gk wepos word; Dak
 wo-wa-pi that related by pictures and writing, root wa in vari-
 ous compounds, relate, count, write, sing, etc. (Gk p is root,
 Dak p suffix.)
 Eu wagh carry, our way; Dak o-we way, trail.
 Eu wad flow forth, our wet; Dak wi-wi a marsh, a springy
 place.
 Eu wasu good; Dak wash-te good.
 Teut wantra winter; Dak wani- winter.
 Icel wakta watch, guard; Dak wakta watch, guard.
 Teut widu wood; Min mida, bida wood.
 Eu sa refrain from; Crow suffix sa the same.
 Teut swa, Old Fris sa like as; Dak se like as.

*A word of this kind used every day by the masses of all Teutonic people, and corresponding
 in the principal languages in such a variety of meanings, could not possibly be derived from the
 Latin unitum. Our sine may be in part from finitum, but fin - I E pin is certainly a Teut word.

Eu sak divide, cut; Min tsaki divide cut.
 Eu sama summer; Min tsame hot, very warm.
 Eu si bind; Min -shi bind; Dak -shi command.
 Swed si! lo! behold! Dak shi! hark!
 Eu su good; Dak -su good.
 Eu suk suck; Min tsuki, Dak zoka suck.
 I E ska shine; Lat candidus white; Dak ska white shining.
 I E ska separate; Dak ksa separate.
 I E ska kill, Gk kten- kill; Dak kte kill.
 I E ska tarry, Gk kta possess; Dak kta defer, tarry, used also
 as sign of future tense. The Mandan future inflection -kit -kt
 -t appears to be an abridgement of this.
 Eu skat spring, leap; Dak skata play.
 Eu ska, skad burn; Dak shku roast.
 Eu skap annihilate; Dak skepa evaporate, remove entirely,
 cause to disappear.
 Eu skap strike; Dak -skapa strike.
 Eu skad, Gk keda spill, scatter; Dak kada spill, scatter, ap-
 plied only to solids.
 Eu skap scratch, shave; Min kape scratch.
 Eu kopa concave; Dak skopa concave.
 Eu skid press; Dak -ski- press.
 Eu sku shave off, flay; Dak -sku shave off, flay.
 Eu skru rough hew; Dak sku broken in gaps.
 Eu snigh cold; Dak sni cold.
 Eu swan sonare; Dak sna ring, rattle.
 Eu skud, Teut skut shoot; Dak kate shoot.
 Teut sota soot; Dak shota smoke, shotkazi soot.
 Eu sad sit; Dak si, siha the foot.

The Dakota words that most resemble I E forms are those
 in daily use, those roots entering into the largest number of
 compounds, those most widely distributed in languages more
 nearly related.

Excluding words repeated in compounds and those contained
 in phrases I have not satisfactorily analyzed, and including
 words derivative rather than compound, I find in Hayden,
 Morgan and Schoolcraft 262 different Iowa words. Of these
 thirty-five as words represent words discussed in this paper;
 thirty-nine others appear to be derived from roots herein dis-
 cussed, a number of them varying from the Dak word only by
 using a different suffix also herein compared. Out of 159 that
 I have been able plainly to trace to Dakota words and roots 121
 are to Dakotan roots and words which seem to be related to I
 E forms. If I had sufficient Iowa material to enable me to find
 Iowa roots independently, I doubt not the resemblance to the
 Dakota would be much increased, and the resemblance to the
 I E in a still greater degree.

The parable of the prodigal son as printed in Dr. Rigg's dictionary, page 61, contains as there printed 417 words, 199 different* words. Of these 36 words, occurring 186 times, are in the exact form† given in this paper; 8 other words, occurring 11 times, as given in my preceding paper; 75 other words, occurring 106 times, are composed wholly of the words, roots and pronominal elements compared with I E forms in the two papers. There remain 114 words, 80 different words. If I have correctly analyzed them they contain the following elements compared in this paper: words and verb roots, 9 times, pronouns 19 times, prepositional and pronominal prefixes 35 times. Much of the remainder, in all about nine-tenths of the whole, seems to me represent I E materials with which I have compared it. I do not doubt that some of the similarities will prove in the end fallacious. On the other hand I have no doubt that many new similarities will be found. My father made a list of 1,243 Dakota verb stems, radical words and words which he could not satisfactorily to himself derive from simpler elements. Of these about 500 seem to be similar to I E forms with which I have compared them, and from them are derived more than three-fourths of the 16,000 words in Dr. Rigg's dictionary.

The pronouns, prepositions and suffixes herein given seem to indicate that the Dakotas did not separate from the Teutonic family till long after the latter separated from the South European family. The fact that the Dak resembles the Icelandic and Gothic in vocabulary and in structure much more than it resembles the older Latin, points in the same direction. The laws of consonantal change in many cases produce the same result as Grimm's law, but the laws themselves are entirely different. It is *certain*, therefore, that the Dakota has not been connected with the Teutonic since the development of Grimm's law made any considerable progress. I have studied the question less, yet I think I have enough evidence in the system of consonantal change to *prove* that the Dakota has not been connected with the Slavonic or Lithuanian since they separated from each other, or for some time previously. It is possible so far as I can now say that the Dak may have borrowed material from some language not I E, but I have found no evidence of it. Undoubtedly the adoption of prisoners has introduced a considerable percentage of Algonkin blood. It is also certain that they have adopted some Chippewa religious observances, but even in these they do not appear to have adopted any Chippewa words.

* Words varied by inflection are classed as different words.

† Except that in accordance with euphonic laws initial k becomes ch sixteen times, and final a e seven times.

