

TABLE II.


In ghe.	In ze.	In zhe.	In de.
'a'-ghe k'a'-ghe k'e'-ghe		tchi'-zhe khdha'-zhe	ʔi'-de ju-de'
bdha ^{n'} -ghe du'-ghe	gi'-ze da'-ze	khdha ^{n'} -zhe du'-zhe da'-zhe	zu'-de zi'-de za'-de

7. Roots in ghe, ze, zhe, and de seem to be related. We find in Dhegiha the roots da'ghe, da'ze, da'zhe, and za'de, though all do not convey ideas of sound. All verbs in dazhe except one, mudazhe, to fillip with the fingers, refer to chafing or blistering the hands or feet. Za'de usually conveys the idea of branching off or forking (with which may be compared the roots gha and za, the noun na^{n'}be' uga'za, the phalanges, etc., etc.); but, in one instance, it refers to sound hu' tē za'de i'nahiⁿ, the voice is really indistinct—that is, the sound scatters instead of going straight to the person addressed. Compare with this the phrase hu' tē da'ghe, the voice is hoarse. Dhi-da'ghe refers to one of the sounds of thunder, “gh+,” whence we have the personal name, Wa-dhi'-da-ghe, Thunder being makes the sound “Gh+!” When a horse walks on hard but unfrozen ground, the sound can be described by na^{n'}-da'ghe as well as by na^{n'}-ʔa'khi. Da'ze is a cognate root. Dhi-da'ze refers to a sound of the thunder, “z+,” whence the personal name, Wa-dhi'-daze, Thunder being makes the sound “Z+!” Zu'de denotes a whistling sound, such as a man makes; whence zu-zu'-de wa-a^{n'}, to whistle a tune, as a man does; and ga-zu'-zu-de, to roar or whistle often, as the wind does. A woman's whistling is described by zi-zi'-de wa-a^{n'}, from the root zi'-de, denoting the hissing sound of confined air that is escaping. Na'-zide, to make a sizzling sound, as when meat is broiling, recalls a fragment of an Omaha story: A fawn that was grazing by his mother's side, detected the approach of some hunters, and warned his parent, but she refused to believe that she was in danger, and insisted that the fawn had seen some crows. The warning was given several times, till it was too late. The hunters shot at the mother and killed her, allowing the fawn to escape. By and by he crept

back and found that the men had cut up his mother, putting her liver on the fire. So he sang this lament :



Naⁿ-ha', ni-a'-shiⁿ-ga'-bi e-he', xa-gha'-bi e-she' dhaⁿ'-shti ;
O mother they are men I said, They are crows you formerly ;
said



Li' dhaⁿ na'-dhi-zi- zi'-dje.
Liver the (ob.) is sizzling on the fire.

“O mother, I said that they were men !
You said that they were crows ;
So now your liver is sizzling on the fire !”

Li'-de is said to refer to a hollow or drumming sound on the floor, the ground, or a door. It is difficult to distinguish it from xu'-ge, another drumming sound. Ju-de' refers to the expulsion of the breath by a person or animal that is nearly exhausted from running, etc. Khdha'-zhe means to scream or cry out, as a young animal does ; whence, dha-khdha'-khdha-zhe, to talk or sing in a quavering voice ; bi-khdha'-khdha-zhe, to make a flute give forth quavering notes, etc., etc. Khdhaⁿ-zhe marks a crunching sound, occurring in ba-khdhaⁿzhe, to crush an egg-shell by pushing at it, and dhi-khdhaⁿzhe, to make the crunching sound heard when a sled is pulled over firm snow on a frosty morning. Compare the root bdhaⁿghe, given hereafter. Tchi'-zhe and its derivative, tchitchi'zhe, refer, as has been stated, to the crackling of twigs and small branches. See xushi, which has been given above. The creaking of new shoes and the sound of fiddle-strings (“ Gi-gi-gi ”) suggest the root gi'-ze (in Dakota, kiⁿ-za), which has several derivatives : ba-gi'ze, to play the fiddle (*i. e.*, make it creak by pushing the bow), dha-gi'ze, to gnash the teeth, and nan-gi'ze, to make (shoes) creak in walking. 'A'-ghe and its synonyms, k'a'-ghe and k'e'-ghe, are used to describe the sounds of filing, grating, gnawing, or scratching on metal, bone, hard wood, etc. The corresponding roots are k'e'-gha in Dakota, k'aghe in Kansa and Osage, and kh'e'-ghe, kh'a'-ghe and 'e'-ghe in Liwewere. Dha-k'a'-ghe and dha-k'e'-ghe mark the sound made by rats when gnawing. Naⁿ-a'-ghe is

the sound made by a horse when walking on frozen ground. See daghe and ʔakhi above. Bdhaⁿ-ghe is a crunching sound, such as is heard when one eats a crust of bread or when a horse eats oats or corn, a dog gnaws a bone and crushes it, or as when one crushes through ice or snow. Yellow Buffalo, a Ponka man, made khdhaⁿ-zhe synonymous with bdhaⁿ-ghe. Duⁿ-ghe has several derivatives: dha-duⁿ-ghe means to make the sound heard when a hazelnut is cracked between the teeth; dhi-duⁿ-ghe, to make the sound heard when a stick is broken in the hands. While the cognate root, duⁿ-zhe, now relates to an *effect*, it may have referred originally to the *sound* made in producing that effect; thus, dhi-duⁿ-zhe means, at present, to split or crack a board by boring, to crack an egg by handling. Other instances of the transfer of meaning can be found. Among them is the following: tchiⁿ-zhe, as has been shown, is an onomatope—one of its derivatives, ba-tchiⁿ-zhe, has two meanings—(1) to make a single cracking sound by pushing against a twig or small branch, which is broken by the act; (2) to push ahead, as through a thicket; whence, aⁿ-ʔi-pa-tchiⁿ-zhe, to persevere in a certain course of conduct, despite all obstacles, regardless of the consequences.

TABLE III.

Dhegiha.	Kwapa.	Kansa.	Osage.	ʔoiwere.	Winnebago.	Dakota.
sha-dhu' sa-dhu' su'e khu'e ʔu'shi bdha ⁿ -ghe ska'pi 123 45	shad ^{ab} a' sad ^{ab} a' su/wad ^{ab} ǵ khu/wad ^{ab} ǵ tu'khi bna'ghe	shayū' sayū' su'we khu'we blū ⁿ -ghe	shadhū' su'wě khu'we	sha'kh'ǵ tha'kh'ǵ tho'kh'ǵ kho'kh'ǵ to'kh'ǵ prū ⁿ -ghě thka'pě	sa'-rǵkh sha'-rǵkh kōkh shōkh tshūkh khu'wu psak 4132	khda, khla } mnu'-gha } khbu

In Table III sa'-rǵkh appears as the Winnebago equivalent of the Dhegiha shadhu', and sha'-rǵkh as that of sa-dhu', being so given by a Winnebago. But future investigation may show that sha-rǵkh is the equivalent of sha-dhu, as sa-rǵkh is that of the sa-dhu. In the same table the Dakota mnugha corresponds to bdhaⁿ-ghe, bnaghe, blūⁿ-ghe, and prūⁿ-ghe; but the Winnebago khu'wu is unlike them; it must be compared with another Dakota root, khbu. In the Winnebago, psak, as compared with skapi, we have a case of metathesis.

A crow is called $\text{x}a'$ -ghe by the Dhegiha, ka' -ghe by the Kansa, Osage, and $\text{J}oiwere$ tribes; but the Kwapa call it ma. Kan-ghi in Dakota means "*raven*" rather than *crow*, although the Dakota name for the Absaroka or Crow Indians is Kan-ghi'wi-cha'-sha, Crow people. The whippoorwill is ha' -ku-gdhě in Dhegiha, ha' -ku-lě in Kansa, ha' -kūn-kdhě in Osage, and $paku'$ wishka in Dakota. The Ponka children give the cry of the whippoorwill as follows: " Ha' -ku-kdhě! ha' -ku-kdhě! a-ja'."

Three verbs, *to cough*, *to snore*, and *to sneeze*, point to the respective sounds made. *To cough* is hu' -khpe; *to snore*, zha' -khdhu'-de (the sound of snoring being expressed by $khdh+$), and *to sneeze* is he' -tchi^a (Kwapa, $hě'$ -shi^a). The writer knows of other Dhegiha onomatopes, but he must defer saying more on this subject until he can publish his Dhegiha dictionaries and grammar.

STONE CIRCLES IN NORTH DAKOTA.—We have received from Mr. George Plato Pierce, of Yorktown, Dickey county, North Dakota, a letter bearing on this subject, which was discussed in Vol. II, No. 2, of this journal. There is space only for a few extracts:

"At the summit of a gentle prairie swell near my house * * * is a circle, about 7 feet in diameter, of bowlders placed about a foot apart. I have found many similar circles, often in groups, in the country hereabouts and in the coteaus to the northwest, in Logan county. The stones are not sunk into the earth, but the soil has accumulated about them, so that it is difficult to remove them without pick or shovel. I suppose these stones were so placed by the Indians to hold down the edges of their tents. * * * A butcher-knife found near the circle first mentioned may have been lost by Indians when encamped there. [He describes the ordinary hunting knife of the old Indian trader.] * * * Often I find a large stone in a depression (one or two rods across) made, I am told, by the buffaloes. Holding their noses on the stone they would bellow and paw; they would then further tear the soil with their horns and wallow in the dirt."

Mr. Pierce relates that a wild buffalo was killed near Oakes, on the James (Dakota) river, as late as last autumn. It is not generally known that the bison survived to such a late date so far east.