Historical Results of Crow-Hidatsa Comparisons, According to Three Methods

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Proto-Siouan had already divided into four languages or groups in proto-historic times. We name these proto-historic languages or groups according to the presumable point of dispersal of the daughter languages of each. These last are the modern Siouan languages and our only source of data. In the following, parentheses give important dialects while brackets give recent locations of modern languages.

Proto-Historic Languages:	Modern Languages:
Eastern Siouan	Catawaba [South Carolina].
Ohio Valley Siouan	Ofo [Louisiana, Mississippi].
	Biloxi [Louisiana, Mississippi].
	Tutelo [Virginia].
Missouri River Siouan	Hidatsa [North Dakota].
	Crow [Montana, Wyoming].
Mississippi Valley Siouan . . (a)	Winnebago [Wisconsin].
	Mandan [North Dakota].
(b)	Chiwere (Iowa-Oto-Missouri) [Nebraska, Missouri, Iowa].
	Dhegiha (Ponka-Omaha-Kansa-Osage-Quapaw) [Arkansas, Missouri, Kansas, Nebraska].
	Dakota (Santee-Yankton-Teton-Assiniboin) [Wisconsin, Minnesota, the Dakotas, and somewhat west and north].

The Eastern Siouan group, now represented by Catawaba alone, is a result of the inspectional approach in the sense that Kroeber recently distinguished between this method, favored by anthropologists, and the comparative method or reconstructive approach, favored by linguists (4 p. 464).

The comparative method shows that a proto-Siouan sequence of sibilant-vowel-stop, as well as the affricate *-ch-*, is preserved only in Biloxi, Ofo, and Tutelo (the vowel is lost in the sequence and the affricate appears as a sibilant in other Siouan languages); and conversely that all three Ohio Valley languages changed from proto-Siouan in having a single consonant, *-n-*, where the other languages retain some form of the old cluster, *-m-* followed by *-n-*; that where all the languages changed from proto-Siouan, as in the case of the old sound *-q-*, the Ohio Valley languages all changed to one kind of sound not appearing in other Siouan cognates: a half dozen features of this kind establish Ofo, Biloxi, and Tutelo as a distinct Siouan group (5 and 6).

The inspectional approach failed to associate Biloxi, Ofo, and Tutelo in the Ohio Valley group, which required the comparative method not for corroboration but for discovery in the first instance. In contrast, casual inspection was overly generous in associating Hidatsa and Crow.

The unique error in Dorsey's famous paper of 1883 is his decision that Crow and Hidatsa are but dialects of one present day language (1 p. 920).

Such alleged intimacy, and more recent emphasis on very close affinity between the two languages, does not explain the striking differences which the following examples show (with orthography using doubled vowels for length, stop plus -*h*- for the aspirated fortis series, but -*sh*- as in English 'ship'; only one of many possible examples is cited for each general statement) (2 and 3).

(1). Hid. *t* (and *ht*), Crow *s*. Hid. *atáarits*, Crow *asáariky* 'he went out'; Hid. *ihtía*, Crow *isáa* 'big'.

(2). Hid. *t* (and *ht* and *th*), Crow *sh*. Lowie points out that in Crow phonology *sh* is replaced by *s* before *a* and -*u*. Some (but not all) instances of this correspondence can be shown to involve the alternating *sh*. Hid. *ruutíts*, Crow *rushí* 'he eats' beside Crow *rusúu* 'they eat'; Hid. *ipítiru* 'behind him', Crow *piishe* 'behind'; Hid. *tsáhti-*, Crow *táshi-* 'to be greasy'; Hid. *pathíts*, Crow *pashíky* 'he falls'.

(3). Hid *ts* (and *hts*), Crow *t* (which is replaced in Crow by *ts* before *i*). Hid. *úuwatsa* 'iron' and 'money', Crow *úuwate* 'iron'; Hid. *rúhtsits*, Crow *rútsiky* 'he takes' beside a Crow form cited by Lowie as *ruth* 'to seize' (not an affricate because a following -*i* is lacking; perhaps aspirated because -*th* is in word-final).

(4). Hid. *k* (and *kh*), Crow *ky* (which may be a positional variant of the velar stop: in most examples *ky* follows a front vowel or is the second member of a cluster, but in one example *ky* is initial, a position also possible for *k* in Crow). Hid. *háshkits* 'it is long', Crow *hashkye* 'long', but Hid. *kua*, Crow *kyo* 'that' (a demonstrative); Hid. *wikhá*, Crow *wikya* 'grass'.

(5). Hid. *k*, Crow *ts* (perhaps a frontal development of *k*, a possibility recognized by Lowie; but the following high, front vowel must have been present when Missouri River Siouan was one language). Hid. *awawáakits*, Crow *áwwatsiky* 'I sit' (Crow -*ww*- is actualized as -*m m*-, but in both languages *m* is merely a positional variant of *w*); Hid. *kíats* 'he fears it', Crow *tsiri* 'he fears'. The apparent converse (Hid. -*ts*, Crow -*ky* at the end of verbs) is not a sound correspondence but a use of two different verb-finals: besides -*ts* which is used in Hidatsa when the verb stands at the end of a sentence, there is also a verb-final, -*ak*, used for verbs in relative clauses. Crow seems to have lost the -*ts* form and the Crow verb-final -*ky* is used more widely than the corresponding -*ak* in Hidatsa (see 4, above).

(6). Hid. -*i* (and -*a*, and -*u*), Crow -*e* (but alternating with medial -*a*- and with final -*a*, under certain morphological conditions). Hid. *tsíiri*, Crow *shiire* 'yellow'; Hid. *tsuwáta*, Crow *tsiwúse* 'brains'; Hid. *ihpú*, Crow *uhpé* 'end, tip'.

(7). Certain sequences of consonant-vowel-consonant appear as such in Hidatsa but appear in Crow with loss of vowel and a resulting consonant cluster (and with occasional metathesis). Hid. *sháaki*, Crow *ishtse* 'his hand'; Hid. *araaxishá-*, Crow *aráaxtia* 'not to know' (a few less well represented correspondences, as Hid. *sh*, Crow *t*, are not given in this paper).

With all these differences noted, why then should the extremely close affinity of Crow and Hidatsa have been stressed? No doubt because there also exist wide-spread identities between the two languages. Specifically, *p, w, r,* and some instances of *x, sh,* and *ts* are often the same in both languages, as *waaxapi-* 'I lie' (but the verb-final in Hidatsa would probably be different than that in Crow); *iriatsi-* 'to think'.

Some identities serve to establish Missouri River Siouan as a distinctive group rather than to indicate an especially recent dialect separation. Thus, as attested by both daughter languages, Missouri River Siouan differed from the other languages in not having nasalized vowels; in making a minimum use of sex gender in addressing persons (especially elaborate in Mandan); in having verb-finals of many shapes and functions, with zero least favored (while zero is either a favorite or the only verb-final in the other languages); in having as a reflex of proto-Siouan *-nk-* and *-ng-* only the stop with loss of the preceding *-n-* (while all other languages preserve some form of the cluster) (6).

Besides the systematic differences noted (1 to 7, above) which corroborate the interpretation of some distant separation of Crow from Hidatsa, there are also words in the two languages which show identities where the regular differences might be expected; these exceptional identities argue for secondary and more recent contacts which permitted borrowing (as Crow *waté,* Hid. *waataki* 'dish'; compare 1 and 2, above).

If there were more than two languages represented in the Missouri River group, dialect geography would be less dependent on the comparative method than it is under these limitations. A fuller roster of closely related languages is presented in the Mississippi Valley group. It was in part of this group that Dorsey did most of his comparative work. By his triliteral-quadriliteral rule he distinguished Iowa-Oto-Missouri (and other languages represented by three letter sequences) from Winnebago. But Mandan shares certain four letter sequences with Winnebago. We therefore place Mandan with Winnebago as a subgroup in contrast to Iowa-Oto-Missouri and the others. Whether this is an overly restricted application of the comparative method, or a lead for discovering an old connection between Winnebago and Mandan can be decided only after historically recent perspectives are gained and, as it were, discounted. We must lean upon dialect geography for gaining our historically recent perspectives.

[Since writing the above my attention has been called to an unpublished paper of Swanton's, privately distributed as part of the Indianapolis Archaeological Conference (1935), in which the author associates Tutelo and Biloxi and Ofo; in various published papers Swanton has associated Tutelo or Biloxi or Ofo, on the one hand, with Dakota, Chiwere, Crow, Hidatsa, Dhegiha, or Mandan on the other hand, that is, with all other Siouan languages except Catawba. I have used Swanton's isolation of Catawba as an example of the inspectional approach. But I cannot accept his other associations as examples of the inspectional approach. The others are listings of logical possibilities.]

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