COMPARATIVE AND HISTORICAL ASPECTS OF NAKODA DIALECTOLOGY[1]

VINCENT COLLETTE

UNIVERSITÉ DU QUÉBEC À CHICOUTIMI

This article is an analysis of the genetic relationship between Stoney and Assiniboine and documents Assiniboine's major dialectal division in the light of comparative and historical data. The first objective consists in a critical analysis of the widespread assumption—which is based on lexicostatistics, sound changes, and lexical differentiation—that Stoney separated from the Dakotan group independently from Assiniboine. I show that many of the sound changes and lexical differences found in Stoney are shallow diachronically and cannot be used to sustain an early separation hypothesis. On the contrary, there are a number of shared innovations that indicate Stoney and Assiniboine descend from an immediate common ancestor, Proto-Nakoda. The second objective is to provide new data on Assiniboine dialectal divisions—specifically phonological reshaping of stems—that help clarify and further refine the internal dialectal divisions of Assiniboine and its historical and genetic relationships with Stoney.

[KEYWORDS: Assiniboine, Stoney, dialectology, comparative method, structural significance]

1. Introduction. Assiniboine (ISO 639-3 asb) and Stoney (ISO 639-3 sto) are two closely related Siouan languages spoken in the northern plains of North America. The former is used in southern Saskatchewan, Canada, and north-central Montana in the United States, while the latter is spoken in central and southern Alberta, Canada (Morley and Eden Valley are in the southern part of Alberta and included in Treaty 7, which covers only southern Alberta). Although Stoney has around three thousand speakers and is taught to children in school, this is not so for Assiniboine, which is now a moribund language, having less than half a dozen speakers in Saskatchewan and a few dozen in Montana. As shown by Parks and DeMallie (1992), there are a number of misconceptions about the identity of the Stoney and Assiniboine people and

their linguistic relationships with Dakota (ISO-693-3 dak) and Lakota (ISO 693-3 lkt). This is clearly reflected in the terminology that was in use until recently since Assiniboine were called "Nakota Sioux." Fortunately, there has been some progress in this domain. In their seminal treatment of the Dakotan linguistic relationships, Parks and DeMallie (1992:251) used linguistic data obtained from a dialect survey to show that there are in fact not three Dakotan groups (Assiniboine, Dakota, and Lakota) but five major dialects: (1) Santee-Sissetton (Eastern Dakota); (2) Yanktonai-Yankton (Western Dakota); (3) Teton (Lakota); (4) Assiniboine; and (5) Stoney. This view has remained unchallenged so far.

Although I praise their use of linguistic data (instead of oral history) to establish internal relationships, I also question their reliance on synchronic data and lexicostatistics to show that Stoney and Assiniboine are distinct languages or "sub-dialects" (in Parks and DeMallie's terminology). The reason underlying my reticence is that the use of synchronic data and lexicostatistics cannot provide deep insights into the history and prehistory of a given speech community, and this is why the major thrust of this article is to do an analysis of Nakoda dialectology and internal genetic relationships from a comparative and historical point of view. The main finding of this article is that Assiniboine and Stoney share a single common ancestor, Proto-Nakoda, and that Stoney did not separate from Assiniboine independently at an early date. The present article unfolds as follows. In **2** I offer a critical review of the methods and results found in Harbeck (1969) and Parks and DeMallie (1992), since these authors state that Stoney diverged from the core Dakotan group early and independently from Assiniboine (**2.1**). Instead, in **2.2** I provide data on shared innovations that suggest Stoney and Assiniboine descend from Proto-Nakoda (contra Parks and DeMallie 1992). In **3** I describe and analyze Assiniboine dialectal data that provide a deeper understanding of the dialectal divisions of this language. More precisely, I show that Western Assiniboine, which is spoken in western Saskatchewan (and in the transitional speech of Fort Belknap), shares a major phonological innovation with Stoney (**3.1**) but also displays many non-lexical innovations not found elsewhere (**3.2**), while Eastern Assiniboine, which is spoken in eastern Saskatchewan and Montana, is more conservative and aligns with Dakota and Lakota in many respects (**3.3–4**). Throughout the paper, I use the notion of structural significance in **4**, defined as the grading of isoglosses in analyzing internal dialectal divisions.[2]

Unless otherwise indicated, all Stoney words are from the Stoney online dictionary (Stoney Education Authority 2022) or Corey Telfer, the dictionary

---

[2] Note that in this article I use the noun *Assiniboine* to designate the Nakoda people living in Saskatchewan and northern Montana and the noun *Stoney* to designate the Nakoda people living in Alberta. This choice of is not meant to offend anyone but is a matter of convenience, since *Nakoda*

editor. Forms for Western Assiniboine are taken from Collette and Kennedy (forthcoming) and were supplemented by conversations with Tom Shawl (Fort Belknap, Montana) and Brenda Haywahe (Carry the Kettle, Saskatchewan). Data from Western Assiniboine spoken at the Mosquito-Grizzly Bear Head reservation were obtained from Kenneth Armstrong. Data for Eastern Assiniboine are from Hollow (1970), Fourstar (1978), and Ryan (1998). I also benefited from extensive conversations with Michael Turcotte (Fort Peck, Montana), Armand McArthur (Pheasant Rump, Saskatchewan), and Pete Bigstone (Ocean Man, Saskatchewan). All Lakota data are from Ullrich (2008). Cognates for Eastern Dakota (Santee) as well as Western Dakota (Yankton-Yanktonai) are from Riggs (1992 [1890]). Finally, Proto-Siouan (PS) and Proto-Dakotan (PD) reconstructions are taken from Rankin et al. (2015). Note that in this article all linguistic data is phonemicized, and so it may not match practical spelling practices.

2. Independent and early separation of Stoney.   Siouan languages split into two large genetic subgroupings (see Ullrich and Black Bear 2016:23). *Core Siouan* comprises the Mississippi Valley group and the Ohio Valley group, while the other group comprises the Eastern Siouan group (Catawba, Woccon, and Yuchi) and the Missouri Valley group (Crow, Hidatsa, and Mandan). Proto-Mississippi Valley Siouan is the common ancestor of the *Dhegihan* group (Omaha–Ponca, Kanza–Osage, and Quapaw), the *Chiwerean* group (Chiwere and Hoocąk), and the *Dakotan* group. As proposed by Parks and DeMallie (1992) the Dakotan group comprises Lakota, Western Dakota (Yankton-Yanktonai), Eastern Dakota (Santee-Sisseton), Assiniboine, and Stoney. The first three members of the Dakotan group were known as "Sioux" and the last two as "Assiniboine" in colonial history, hence the confusion that persisted up until recently in the terminology (see Parks and DeMallie 1992 for a meticulous study of the history of this confusion). In the following sections I review and reject the methodologies and findings underlying Harbeck's (1969) and Parks and DeMallie's (1992) classifications of Stoney and Assiniboine and show that they likely descend from the common ancestor Proto-Nakoda, a suggestion made by Ullrich (2018:35).

2.1. Methodological problems underlying Parks and DeMallie's classification.   Traditionally, the classification of the Dakotan group has been made using the distribution of the phonemes *n*, *d*, and *l* (which are reflexes of *R in Proto-Dakotan; see Blevins, Egurtzegi, and Ullrich 2020:328–31)

serves as a self-designation for both the Stoney and Assiniboine, which are now two distinct ethnolinguistic groups.

TABLE 1
DIAGNOSTIC OF DIALECTAL DIFFERENCES

	'friend'	'male decl'	'to sing'	'diminutive'	'eight'
Stoney (southern)	—	no [ᵈno]	nową́, nųwą́	-n, -ną	šaȟnóʕą
Assiniboine	khoná	no [no, nᵈo]	nową́	-na	šaknóǧą
Western Dakota	khodá	do	dową́	-na	šagdóǧą
Eastern Dakota	khodá	do	dową́	-da; -dą; -na	šahdóǧą
Lakota	kȟolá	lo	lową́	-la	šaglóǧą

in corresponding words for 'Indigenous person' (e.g., *Nakhóta*, *Dakhóta*, *Lakȟóta*), 'friend', the male declarative particle (DECL[3]), and the verb 'to sing', as shown in table 1 (which includes shows some nontraditional diagnostics 'diminutive' and 'eight' as well).

Table 1 displays data ('friend, 'male DECL', and 'to sing') that fit the three-way NDL dialectal division. However, as shown by Parks and DeMallie (1992: 240), this is an oversimplification of the divisions, since in the case of the diminutive suffix *-na*, *-da*, or *-la*, a mere mechanical substitution of one phoneme in Assiniboine (*-na*) cannot be relied on to guess the cognate in Dakota subdialects (*-da*; *-dą*; *-na*). In other words, the NDL or three-way dialectal split fails to clearly represent Dakotan divisions since it does not account for the occurrence of *n* in Western Dakota (where *d* would be expected), nor does it point to differences between Stoney and Assiniboine, which are now distinct languages with limited mutual intelligibility.[4] As shown in table 1, the comparative set for 'eight', which contains a consonant cluster with initial *ȟ*, *k*, *g*, or *h*, would seem like a better diagnostic—according to Parks and DeMallie—for dialectal differentiation than the NDL division since it aligns with five distinct ethnolinguistic groups. Although Parks and DeMallie (1992:251) recognized that Stoney and Assiniboine "share a common origin," they also point out, with a visual metaphor, that sound changes and lexical differentiation "serve to differentiate Stoney and *set it far apart* from all the other dialects of Sioux and Assiniboine" (250; emphasis added).

---

[3] Abbreviations: DECL = declarative marker, E = East, FP = Fort Peck (Montana), INST = instrumental prefix, NDL = *n*, *d*, and *l* phonemes reflecting Proto-Dakotan *R to classify Dakotan languages, PD = Proto-Dakotan, PL = plural, PR = Pheasant Rump (Saskatchewan), PS = Proto-Siouan, S = Santee-Sisseton Dakota, SG = singular, W = West, Y = Yankton-Yanktonai Dakota.

[4] In fact, Assiniboine have more problems understanding Stoney than vice versa (Linda Cumberland, p.c. 2021).

The hypothesis that Stoney branched off early and independently from Assiniboine is not entirely new and seems to take its source in a study done by Harbeck (1969) (cited in Parks and DeMallie 1992:248) on mutual intelligibility among the Dakotan group. Harbeck (1969:12–13) shows, based on text intelligibility and lexicostatistics, that Stoney and Lakota share 83 percent of a modified Swadesh list of 98 items (81.34 items out of 98), while Stoney and Assiniboine share 89 percent of cognates on this list (87.22 items out of 98). Assuming that basic vocabulary loss is constant and that two languages lose approximately 14 shared items per millennium (13.72 items out of 98), the calculation indicates that the date of divergence of Stoney and Assiniboine occurred around 1235 AD[5] and that of Stoney and Lakota occurred around 806 AD. The latter split is the deepest divergence within the Dakotan group. Harbeck (1969:19) concludes that "the linguistic separation of A[ssiniboine] and S[toney] is considerable, and that A[ssiniboine] is actually more closely aligned to M[anitoba]-N[orth]-D[akota] than it is to S[toney]."

In his dissertation on Lakota, Jan Ullrich also puts forth the hypothesis that Stoney separated from the core Dakotan group earlier and independently from Assiniboine, but he is cautious in his treatment of the question: "The Stoney Nakhóta language shares many similarities with Assiniboine, but it is also divergent enough from it to suggest the possibility that Stoney speakers separated from the ancestral group earlier than and independently of the Assiniboine speakers" (Ullrich 2018:38). Although Ullrich did not elaborate on this hypothesis, some cautionary remarks are needed concerning (i) the methods and assumptions of lexicostatistics; (ii) the diachrony of sound changes that occurred in Stoney; and (iii) the use of loanwords and lexical differences in establishing historical and genetic relationships.

First, one of the basic assumptions of lexicostatistics is that the replacement rate of a language's basic vocabulary is constant, therefore since Stoney is highly divergent from Assiniboine, its nearest relative, the separation must be ancient. However, one has to remember that rapid and drastic phonological changes occurred in some languages of the North American Plains under special historic and cultural conditions. This has been demonstrated for Plains Algonquian languages like Arapaho and Atsina (Pentland 1979), and it also applies, to a certain extent, to Stoney (see Taylor 1983). There are other important problems with lexicostatistics, namely synonymy and semantic extension. I will limit myself to three alleged differences between Stoney and

[5] A booklet about the Assiniboine people published by the Manitoba Culture, Heritage and Recreation, Historic Resources Branch (1997:2) contains an unreferenced glottochronological dating of the separation of Stoney from the rest of the Dakotan group: "Initial [glottochronological] results indicate that the Stoney separation took place about AD 1200 and that the remainder of the Assiniboin had become a distinct group by AD 1500."

Assiniboine as provided by Harbeck, who had to work without reliable lexicographic sources: 'mountain', cloud', and 'fire'. While Harbeck (1969) has a mismatch between Stoney *iyáȟe* 'mountain' and Assiniboine *ȟé* 'mountain, mountain ridge', the latter is in fact a cognate of the former. Moreover, Assiniboine *íyaȟe* 'mountain, stony hill' (lit. "stone-ridge"), not provided by Harbeck, is a perfect match for Stoney *iyáȟe.* The other problem is that Stoney underwent a great deal of semantic extension in its basic vocabulary, so that a Stoney cognate can match an Assiniboine cognate but in form only, not in meaning. For instance, Stoney *oháði* 'cloud' does not match Assiniboine *amáȟpiya* 'cloud' but rather *a'óhązi* 'it is cloudy, overcast; shade'. A better match is Stoney *maȟpíya* 'sky, heaven, universe', which is not cited in Harbeck's study. Lastly, Stoney *iktú* 'fire' does not match Assiniboine *phéta* 'fire' but *iktú* 's/he/it is lit, in flames' instead, a form not reported by Harbeck. In sum, lexicostatistics has to be semantically permissive to function, but by allowing this the number of cognatic differences is also reduced and so is the antiquity of the alleged separation. This provision makes the whole method of highly doubtful utility.

Second, the divergence of Stoney phonology, which is in part responsible for mutual unintelligibility with the rest of the Dakotan group, is due to rapid sound changes, some occurring before the mid-1700s and others over the course of the nineteenth century. In general, these changes appear to be innovations rather than retained archaisms, although Stoney does retain some archaisms, possibly some nasal vowels that have been de-nasalized in the other languages. There are a few old Stoney word lists covering almost 75 years (1743–1808) that enable us to track the chronology of some sound changes in Stoney. Taylor (1983:31–33) did a thorough comparative study of old Stoney word lists written at the turn of the eighteenth century, but he did not include the oldest known Stoney word list, that of James Isham (in Rich 1949:36, 42–46). Below is a list of Stoney sound changes taken from Taylor (1983) on which I added data from Isham's list:

(1) presence of pharyngeal fricatives *ħ* and *ʕ* from Proto-Dakotan uvulars *ȟ̌* and *ǧ* (Isham did not perceive these sounds; he omitted to write them, as in ⟨poe⟩ *póʕe* 'nose', or he used ⟨g⟩, ⟨ck⟩, and ⟨c⟩ interchangeably for both pharyngeals, as in ⟨shaw gun no gaw⟩ *šaħnóʕą* 'eight');

(2) in Proto-Dakotan clusters with *k* followed by a sonorant, the former reflects as h in Stoney (Isham has ⟨Ene mooe⟩ *ihmú* 'lynx' for Assiniboine *ikmú*);

(3) Proto-Dakotan *tp* occurs as *kp ~ tp* in Stoney (later metathesized into *pt*) (Isham has the early *tp* cluster ⟨non tea paw ech⟩ *nątpaʕeȷan* 'marten' for modern Stoney *nąptaʕeȷan* so this change likely happened in the second half of the eighteenth century);

While the first two changes already occurred in old Stoney or were starting to fluctuate (as with the third) at the end of the eighteenth century, other sound changes are not shown in these early word lists or written inconsistently (in the case of Isham). However, they occur in modern Stoney as recorded in the twentieth century:

(4) metathesis of *tk > kt* (Isham's word list has no metathesis of *tk*; ⟨min nee a'tee caw⟩ *mịnị yatką́* 's/he drinks water' for modern *yaktą́*);

(5) voicing of initial and intervocalic plain stops (this is marked inconsistently by Isham, since he used symbols for unvoiced stops all throughout his list, as in ⟨ene tea⟩ *nịdé* 'rump', except in a few instances, as in ⟨Chande a⟩ *čhạdé* 'heart');

(6) shift of unstressed *ų* to *ị*.

The fact that some sound changes were already completed while others were partly completed or had not occurred yet when the early vocabularies were recorded indicates that mutual unintelligibility between these two languages is a gradual phenomenon and that Stoney became an independent language fairly recently (i.e., in the last 350 years).[6]

Third, one has to be extremely careful with lexical isoglosses and especially recent coinings or loans like the nouns for 'pig', 'money' (Stoney *sụniya* 'money' is from Plains Cree *sôniyâw*; online dictionary), or 'gun' when working with hypotheses concerning early and independent separation of a language from the rest of the proto-group. The word for 'gun' (given by Wolvengrey and Ahenakew 2001) is a case in point, since old Stoney word lists have ⟨chu tung⟩ (Umfreville 1795) and ⟨tchotanga⟩ (Henry's journal of 1808 [in Coues 1897]) phonemicized as *čhothą́ga* 'gun'.[7] This is a perfect match for Assiniboine *čhóthąka* (lit. 'čhoooh' + *-thąka* 'big' where the former element being an onomatopoeia for the sound of a gun). Hence, while modern Stoney *yuptą́hą* 'gun' does not match Assiniboine, it is nevertheless a recent coinage that happened in the late nineteenth century and cannot be used to show an independent

---

[6] In my view the shift of unstressed *ų* to *ị* and the innovative stress system of Stoney (see Shaw 1985) are more important in creating mutual unintelligibility than the development of pharyngeal fricatives ħ and ʕ. In terms of phoneme frequency, the changes from Proto-Dakotan *ǧ to Stoney ʕ and Proto-Dakotan *ȟ to Stoney ħ cannot be decisive in accounting for mutual unintelligibility between Assiniboine and Stoney. For instance, I counted the number of phonemes occurring in head words in three randomly selected pages in Collette and Kennedy's (forthcoming) dictionary of Assiniboine (but the count must be similar for Stoney) and obtained the following figures: in Assiniboine ǧ occurs 8 times out of 832 phonemes (0.96%) and ȟ occurs 10 times out of 832 phonemes (1.2%). The low frequency and similarity of Stoney ħ and ʕ phonemes with their Assiniboine counterparts are too weak to create unintelligibility.

[7] The coining of this word must date back to the turn of the eighteenth century when French muskets were introduced at Fort York and diffused westward from the shores of Hudson Bay through trade. Lakota and Dakota coined another term, *mázawakȟą* 'gun' (lit. "metal-mysterious").

separation of Stoney from the core Dakotan group. In fact, the case of 'gun' indicates that Assiniboine and Stoney were still in contact when the coining of this word occurred (provided it is not an independent innovation in both languages). Obviously, lexical words that refer to traditional objects or activities and that differ in shape from their Assiniboine equivalents are more promising, and there are plenty in Stoney, but as stated by Taylor (1983:34) the fact that many Stoney words for animals are descriptive in nature is an indicator that they are recent. In sum, mutual unintelligibility between Stoney and Assiniboine is based on sound changes and lexical differentiation, but the close examination of the linguistic facts indicate that they are shallow, since as Taylor (1983:31) puts it, "Alberta Assiniboine [i.e., Stoney]—now so very different from other forms of Assiniboine—differed considerably less than 200 years ago." In my view these changes (along with the flawed methods of lexicostatistics) cannot be used to sustain the claim that Stoney diverged early and independently from Assiniboine. These methodological flaws are enough to raise the question of a subgrouping of Stoney and Assiniboine under a common ancestor, Proto-Nakoda.

2.2. Shared innovations and the question of Proto-Nakoda.   It seems likely that by the end of the seventeenth century, the Assiniboine and the Stoneys were already separate political entities, as shown by the fact that they were distinguished with different names in the Hudson Bay Company records (see **3** below and also Russell 1990:357) and that they had developed major differences in material culture and land-use practices. While nonlinguistic differences between ethnolinguistic groups are interesting in their own right, they should not interfere with the question of linguistic subgrouping.

The only widely recognized criterion for subgroupings is shared innovations that are not due to convergent development. As defined by Campbell (2013:175), "[a] shared innovation is a linguistic change which shows a departure (innovation) from some trait of the proto-language and is shared by a subset of the daughter languages." The assumption is that if the languages of this subset share some unusual innovations, then this indicates that they occurred in a single parent language that subsequently split into offspring languages that retained the innovations. As far as I know, only Ullrich (2018:35) has suggested an intermediate language covering both Stoney and Assiniboine, which he calls simply "Nakota". In what follows I intend to substantiate his claim. Table 2 provides a set of shared innovations between Stoney and Assiniboine (I include Lakota, Dakota, and Proto-Dakotan forms for comparative purposes; note that INST stands for instrumental prefix).

Not all shared innovations have the same weight in substantiating a subgrouping or subfamily. The first two rows of table 2 deserve a comment since they are unusual innovations and cannot be the product of convergent development. First, the medio-distal demonstrative is an important indicator

TABLE 2
SHARED INNOVATIONS BETWEEN STONEY AND ASSINIBOINE

Gloss	Stoney	Assiniboine	Dakota	Lakota
PD *hé 'that'	žé	žé (hé)	hé	hé
PD *R	pre-occluded ^dn, ^bm after oral vowels	post-occluded n^d, m^b before oral vowels and in CC	—	—
PD *W	m	m	w, p	w
(i) inst 'shoot, hit in a distance'	mo-	mo- (~ po-)	wo-, po-	wo-
(ii) inst 'saw, cut with sharp tool'	ma-	ma-	wa-, pa-	wa-
PD *ȟtA, ȟtį ~ ȟti 'intensifier, non-specificity, focus'	-ȟ	-ȟ	ȟį, ȟįča	ȟče
declarative markers	-čh, -čha -čhwe	-čh, -čhe	—	—
'be small'	-ǰuθkį́n (in compounds)	čúskina čiškína	čísčina (Y) čístina (S)	čísčila
'be little'	ǰuθį́n	čúsina	—	—
'knee'	thaȟáge	thaȟáke	čhąkpé	čhąkpé
'ankle'	θikhą́ 'heel'	sikhą́	išká	išká
'armpit' (PD *á)	ačhóga	ačhóka	á	á
'tomorrow'	hakhéǰį	hąyákheči	hąȟ'ą́na	híhąni kį

for the postulated subgrouping since Stoney and Assiniboine have innovated *žé*
as the main form (although *hé* also occurs as a variant in both languages). The
crucial fact here is that buccalization of *h to ž does not occur in Assiniboine
or Stoney, indicating it was likely inherited as such from Proto-Nakoda (e.g.,
PD *hečá 'buzzard' > *hečá* in Lakota, Dakota, and Assiniboine).[8]

Second, pre- or post-occluded nasals are also an unusual innovation that oc-
curs in eighteenth- and nineteenth-century Stoney and Assiniboine word lists:
n and *m* become [^dn] and [^bm] after oral vowels in modern Stoney (see 'male
declarative particle' in table 1; see Mills 2000 for a discussion of this phe-
nomenon) and [n^d] and [m^b] before oral vowels and in consonant clusters in
Assiniboine. Although nowadays it is retained in the speech of older speakers

8 I recorded *žé* in both the eastern and the western dialects of Assiniboine, but one speaker
from Carry the Kettle used *hé* along with *žé*. It is either a retained archaism of PD *hé or a fast
speech variant due to lenition of *ž* into *h*. Either way, the presence of *žé* in both Stoney and As-
siniboine is a shared innovation. For Stoney *hé* occurs in Laurie (1959) and *žé* in Harbeck (1973),
both of whom worked in Morley, Alberta, and Alexander Henry (in Coues 1897) noted ⟨jai⟩ *žé*,
⟨shai⟩ *šé* (see Rhyasen Erdman 1997:25), and ⟨aai⟩ *hé*, indicating that *žé* was already present at the
beginning of the nineteenth century as noted by Taylor (1983:34). Nowadays only *žé* is used in
Stoney spoken in Morley, Alberta (Corey Telfer, p.c. 2021).

of Western Assiniboine, it had a wider distribution in the past—occurring, for example, in Edward Denig's published work (2000 [1930]; 1854(4))—which reflects the geographically distant eastern dialect.

For Stoney, Isham (in Rich 1949:36, 42–46) did not write the pre-occluded nasals except in two entries where they are represented as post-occluded: ⟨Chun dee ⟩ *čhąn^{d}í* 'tobacco' (*įdukhabi* 'tobacco' is a new coining in modern Stoney) and ⟨cha cun dee⟩ *čhaħn^{d}í* 'gunpowder' for 'coals' in modern Stoney. Henry's word list (in Coues 1897) has only a few instances of pre-occluded nasals, such as ⟨mindai⟩ *mn^{d}é* 'lake'. For Assiniboine, Denig—in his report on the Assiniboine (2000 [1930]) and *vocabulary* (in Schoolcraft 1854(4))—has instances of post-occluded nasals in intervocalic position after oral vowels: ⟨Tah dó⟩ *than^{d}ó*; ⟨Chaun deé⟩ *čhąn^{d}í* 'tobacco'; ⟨Tah pái g'ha wah án do wàh⟩ *thapéȟ'a wan^{d}ówą* 'singing frog'. However, most of the cases are found in consonant clusters involving reflexes of Proto-Dakotan *R (> Lakota *l*, Dakota *d*, and Assiniboine *n*) and *W (> Lakota *w*, Dakota *b*, and Assiniboine *m*).[9] In a few instances, Denig did not write post-occluded nasals in clusters and intervocalic positions (as with other early writers): ⟨Ah-wah minne o minne⟩ *wamní'omni* 'Tourbillon' (modern 'whirlwind'); ⟨O-canah-hhai⟩ *Okná hé* 'Emptying Horn' (personal name; with *okná* 'in, through'); ⟨Menah⟩ *mína* 'knife'. I think it might be due to a slip of the pen, since post-occluded nasals occurs consistently in Hayden's (1863) word list of Eastern Assiniboine.

Lastly, although some forms have not been reconstructed in Proto-Dakotan, there are some clear instances of shared lexical innovations between Stoney *ačhóga* and Assiniboine *ačhóka* 'armpit', which are different from PD *á. There are likely more shared innovations to discover, but those presented in table 2 above strengthen the hypothesis of an intermediate proto-language from which Stoney and Assiniboine descend directly. Figure 1 (which is reworked from Ullrich 2018:35) shows the distribution of genetic relationships within the Dakotan group along with relative time depth.

In this section I have shown that a comparative analysis of old word lists prevents the use of shallow linguistic differences or lexicostatistics to sustain an early separation of a given language from the rest of the group. Moreover, I documented a number of unusual innovations shared by Stoney and Assiniboine that indicate that these two languages descend from a common immediate ancestor, Proto-Nakoda. Figure 1 indicates that Assiniboine split into two dialects, a topic that will be treated in the next section. Comparing Rhyasen

---

[9] The examples found in Denig are as follows: (i) PD *WR > *mn^d* as in ⟨Ah'h h'ho yà pè min-dóo⟩ *ağúyapi mn^{d}úna* 'flour' and ⟨Wam an dós kah⟩ *wamn^{d}úška* 'insect'; (ii) PD *kR > *kn^d*: ⟨Kin dáh⟩ *kn^{d}á* 's/he goes back to where s/he is from'; ⟨Shák kan dó ghah⟩ *šakn^{d}óğą* 'eight'; ⟨Kan-dai-ghah We-yah⟩ *Kn^{d}éğa Wíyą* 'Spotted Woman' (personal name); (iii) PD *ȟR, *sR > *ȟn^d, sn^d*: ⟨Mah káh hhin deé hhe deé⟩ *mak^{h}áȟn^{d}iȟn^{d}i* 'bog'; ⟨Sndoo-kah⟩ *sn^{d}úka* 'circumcised'.
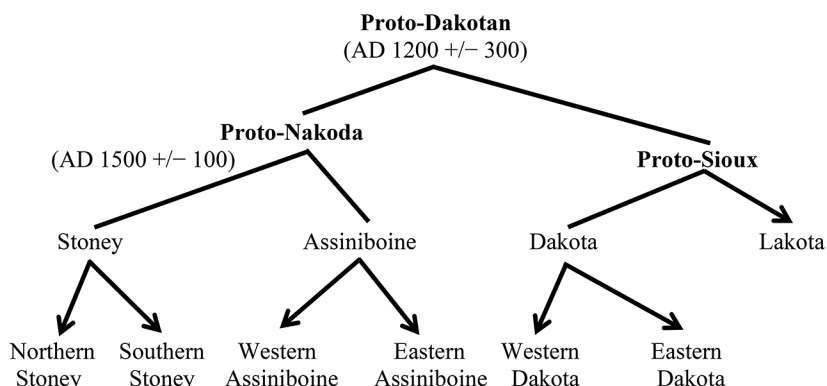
FIG. 1—Proto-Dakotan internal divisions

Erdman (1997) to the work of Laurie (1959), Bellam (1975), and Harbeck (1973) provides enough documentation to include the Northern Stoney and Southern Stoney branches. However, since this has not been systematically investigated, I leave this topic for further research.

3. Assiniboine dialectal isoglosses.   Two culturally distinct groups of Assiniboine are mentioned by early Hudson Bay Company traders like Kelsey (1690–91) and Henday (1754–55) who made trips inland from York Factory, Ontario (Ray 1974; Russell 1990:chap. 11). These are the "Woodland Assiniboine" (or "Northern Assiniboine"), who are the ancestors of modern Stoney, and the "Plains Assiniboine" (or "Southern Assiniboine"), who are the ancestors of modern Assiniboine. The distinction between these groups of Assiniboine is one of manner of dress since men from the southern group made little or no use of clothing in the summer, while this is not so for the northern group. Russell (1990:362) shows that this peculiar difference in material culture (and the fact that both groups had different chiefs) served as the basis for the distinction between the Woodland and Plains Assiniboine, the former being more similar to the Cree and the latter to the other Plains groups to the south. However, this ethnic distinction also has an ecological basis (Ray 1974). The northern group resided in the boreal forest and relied on hunting and fishing, while the southern group roamed the plains for buffalo, but both made use of the parklands in the winter. As suggested by Ray (1974:21), the Southern Assiniboine further divide into the Plains Assiniboine proper and an intermediate mixed group of Cree and Assiniboine inhabiting central Saskatchewan. This mixed group is referred to as the "Keskatchewan and Southern Senipoet" group. My hypothesis is that the Assiniboine faction of this mixed group may be the ancestors of Western Assiniboine speakers, but more detailed research is needed.

In figure 1 we can see that Assiniboine splits into two dialects. This dialectal division is based on Parks and DeMallie (1992:238; see also Parks and Rankin 2001:96) and rests on lexical isoglosses (although they did not publish examples) and the metathesis of *tk* into *kt*. In their analysis, one dialect (which I label "Western Assiniboine") is spoken in the Mosquito-Grizzly Bear Head[10] and Carry the Kettle reserves in Saskatchewan, and to some extent in Fort Belknap, Montana, while the other dialect ("Eastern Assiniboine") is spoken in White Bear, Pheasant Rump, and Ocean Man reserves in Saskatchewan as well as in Fort Peck, Montana. The distinction between these two dialects of Assiniboine seems to correspond roughly to the two historical groups of Plains or Southern Assiniboine—namely, the mixed group of Cree and Southern Assiniboine (western dialect) and Southern Assiniboine proper (eastern dialect). Table 3 provides a list of isoglosses that runs between the three groups of communities where Assiniboine is spoken. For comparative purposes, I include data from Stoney (spoken in Morley, Alberta), Lakota, and Dakota (Yanktonai and Santee), as well as some reconstructed forms in Proto-Dakotan (PD). Darker shading is used to highlight differences in the two dialects of Assiniboine, while bold segments are used to indicate changes from the historical form.

In the remainder of this section, I describe and analyze the isoglosses presented in table 3, following their structural categories: the phonological differences metathesis (**3.1**) and phonological stem reshaping (**3.2**), pragmatic differences (**3.3**), and lexical differences (**3.4**). The order of presentation of isoglosses implies different structural significance for dialectal divisions, a notion to be discussed below (**4**).

3.1. Metathesis of *tk* > *kt* (item 1).   The merging of Proto-Dakotan clusters **tk* and **kt* via metathesis of the *tk* cluster to *kt* (Taylor 1983:32; Parks and DeMallie 1992:248; Cumberland 2005:36) is one of the most characteristic phonological features of Stoney and Western Assiniboine spoken in Canada (i.e., Carry the Kettle and Mosquito-Grizzly Bear Head reserves). Most speakers from Carry the Kettle I worked with produced metathesis in all contexts, but curiously it does not occur in Drummond (1976) (e.g., *tká* 'heavy', *įtkų́* 'lit'), which is the oldest collection of texts from Carry the Kettle. Cumberland (2005:40) also noted that not all speakers from Carry the Kettle produce metathesis and that those who do not produce it belong to the same cluster of families that had migrated from Fort Belknap in the early twentieth century but who stayed separated from the rest of the community for some time (Linda Cumberland, p.c. 2021). A very likely scenario is that Drummond worked with

---

[10] Forms obtained from Mosquito-Grizzly Bear Head (Saskatchewan) are identical to those of Carry the Kettle, except for *Wašíču sápa* 'African American,' which aligns with Eastern Assiniboine.

members of the families that did not produce it, hence its absence in her text collection.

Metathesis of *tk > kt* is indeed very distinctive (when compared to Eastern Assiniboine or Lakota, which are more conservative in this regard), and it is invoked by Assiniboine speakers to differentiate the dialects, but it does not seem to be an old phenomenon. Metathesis does not occur in old Stoney word lists: Isham has ⟨min nee a'tee caw⟩ *mịnị yatką́* 's/he drinks water' (for modern *yaktą́*) (in Rich 1949); ⟨wintika⟩ *wịtka* 'egg' occurs in Alexander Henry's journal collected around 1808 (in Coues 1897); and ⟨paht kuch un⟩ *patkášan* 'turtle' is in found David Thompson's journal collected also around 1808 (in Coues 1897) (see Taylor 1983:32). I was not able to find examples of metathesis in old documents written in the western dialect, but metathesis does not occur in Prince Maximilian of Wied's word list (e.g., ⟨sittekanne⟩ *zitkána* 'bird' [in Thwaites 1906]), nor in Denig's work (e.g., ⟨Sit-kap-pe-nah⟩[11] and ⟨Zit káh nah⟩ *zitkána* 'bird'; ⟨Weét kah⟩ *wịtka* 'egg'; ⟨Yat káh⟩ *yatką́* 'to drink') (Denig 2000 [1930]; 1954). I assume that the Assiniboine data provided by Denig and Prince Maximilian are taken from the more conservative eastern dialect. There are two reasons underlying this assumption. First, Denig spent most of his adult life as a fur trader operating at Fort Union located on the Upper Missouri (on the border of Montana and North Dakota). This fort is located halfway between the historical homeland of the "Plains Assiniboine" or Eastern Assiniboine and the Mandan, Arikara, and Hidatsa. Second, Denig married a Lakota woman in a first marriage and later an Assiniboine woman who was related to chiefs that are the ancestors of modern bands living in Fort Peck. Third, Prince Maximilian (1782−1867) sojourned along the Upper Missouri in 1834−36 and most likely came into contact with speakers of the eastern dialect instead of more northerly groups.

In sum, since metathesis does not occur in Old Stoney word lists nor in Eastern Assiniboine, I am inclined to think that it is a fairly recent innovation that started in the late nineteenth century and diffused by contact along the boundary between Western Assiniboine (spoken in Canada) and Stoney.

3.2. Phonological reshaping of stems (item 2).   Phonological reshaping of stems is a term that covers different phenomena:

(i)   reshaping of an initial historical glide + vowel: Proto-Dakotan **yąkÁ* 'sit' > *yąkÁ* > *yịkÁ ~ (h)ịkÁ* in Western Assiniboine and *ịgá* 'stay' in Stoney (2a);

---

[11] Note that both Prince Maximilian and Denig have devoicing of *z* into [s] word initially for 'bird'. I found such a devoicing in the speech of a woman from White Bear (Eastern Assiniboine) who produced *sitkána* instead of *zitkána* 'bird'. The voiceless fricative *s* is unexpected and may be due to diminutive sound symbolism.

TABLE 3
COMPARATIVE DIALECTAL DATA

Gloss	Stoney	Western Assiniboine		Eastern Assiniboine	Lakota
		Canada	USA		
(1) *tk > kt* 'bird'	θíktán	zíktána		zitkána	zįtkála
'it is heavy'	**ktá**	**ktá**		tká	tké
(2) stem reshaping					
(a) 'sit' (PD *yąkÁ*)	įgá	yįkÁ, (**h**)įkÁ		yąkÁ	yąkÁ
(b) 'ask' (PD *iwúğA*)	įyúša	iyúğA, įʔúğA	įwúğA	iyúğA, iwúğA	iyúğA, iwáğa (S)
(c) 'book'	owábi 'book, paper, writing'	waʔóyapi	wówapi	waʔówapi, wówapi	wówapi
(d) 'camp' (PD *thįwą*)	—	othųye		othųwe	othųwe, othúwahe
(e) 'lie down; sleep on' (PD *wąkÁ ~ *yųkÁ*)	—	įyųkA	**įwųkA**	įyųkA, **įwųkA**	įyųkA, iwąka (Y, S)
(f) 'bed' (PD *owųkA*)	owíga	owąka	owųka	owąka, owųka	oyųke

(g) 'and, also'	kho	khóya	khówa	—	khóya khóya (S)
(h) 'know'	θnoyá	snokyÁ	snokyÁ snonyÁ	snohyÁ snonyÁ	slolyÁ
(3) he 'interrogative particle'	hų́wo (M) hị́we (F) hị́ (neutral)	male and female speakers		**male speakers only**	male and female speakers
(4) 'seven'	šagowį́, šagówį	**iyúšna**	**iyúšna** (~ šakówį)	šakówį (~ **iyúšna**)	šakówį
(5) 'walking cane'	θą́hnę	sakné		sakyé sakné (FP)	sagyé
(6) 'African American'	Wašíju θápa	Hásapa		Wašíču sápa	Hásapa
(7) 'left-handed'	čha**kt**á	čha**kt**á	čhatká	čhatká (~ **swéphatahą**)	čhatká
(8) 'otter'	θįdé gaphéya	ptą́		šičéča (PR) škečá ~ ptą́ (FP)	ptą́ 'otter', škéča 'fisher'
(9) 'wolf'	šįktogéja, šį**któga**	šųkthókečA, šų**kthóke**na		šųkthókeča	šų**kmánitu** tȟáka

(ii)   change of the glide *w* (< Proto-Siouan *w) into *y* (2b, c, d), or *y* into
       w (2g);
(iii) variation in the reflexes of the Proto-Dakotan doublet *wąkÁ ~
       *yųká 'lie down' (2e) and Proto-Dakotan **owų́kA* 'bed' (2f);
(iv)   reshaping of the verb *snonyÁ* 'know' (*n* > *k* > *h*) (2h).

The isoglosses that display phonological reshaping of stems are not mentioned
in the literature (except in Taylor [1983:33] for (2a) 'sit'). However, they are
significant quantitatively since most of them run between the speech of Carry
the Kettle, including Mosquito-Grizzly Bear Head, and that of Fort Belknap,
exactly like metathesis seen above.

As shown by Rankin et al. (2015), Proto-Siouan-Catawba *wų dissimilates
to *wą* ~ *rų* ~ *rą*, which is the source of the Proto-Siouan doublets **rą:-* 'sit'
(2a) and **wą:-* 'lie' (2e, f). In Eastern Assiniboine this doublet yields *įwų́kA*
'lie down' (< Proto-Mississippi Valley Siouan **wų́kE* ~ **yų́kE*) and *yąkÁ* 'sit
down' (< Proto-Mississippi Valley Siouan *rąkE). Rankin et al. (2015) ob-
served that "[t]he sequence **w+u* seems to be inherently unstable in Siouan,
and the result is always dissimilation of either the vowel, to *a*, or the glide,
to *r* (or its various reflexes)." This explains why in all Dakotan dialects *yąkÁ*
inflects like a W-stem verb for first (*mąká*) and second persons (*nąká*) like
other W-stem verbs (e.g., *įwų́ǧa* 's/he asks him/her', *įmų́ǧa* 1SG, *įnų́ǧa* 2SG).

As shown in table 4, data for the western dialect spoken in Canada are
transitional—between the more conservative eastern dialect *yąkÁ* and Stoney
įgá—and clearly indicate the sequence of this phonological reshaping. (I have
included the Stoney and Assiniboine forms from Taylor (1983:33) since they
show that the reshaping spread from 3SG/1PL to 2SG to 1SG.)

In the western dialect spoken in Canada, vowel raising (*ą* > *į*) was triggered
by the glide *y* for the third person, then it extended optionally to the second per-
son (*nįká*; as recorded by Taylor 1983:33), but it never affected the first person
form (*mąká*). Stoney went through the same process initially but dropped the
initial glide *y* completely, and all the forms underwent paradigmatic leveling.
The western dialect has also innovated for the verb *įyų́ǧA* ~ *į'ų́ǧA* ~ *įwų́ǧA* 'ask'
(2b), since it shows the following development: Proto-Dakotan *w > *w* > *y* ~ '[?].

TABLE 4
YĄKÁ 'SIT'

	Stoney	W. Assiniboine (Canada)	W. Assiniboine (USA) / E. Assiniboine	Lakota
1sg	m**i**gáč	mąká	mąká	mąké
2sg	n**i**gáč	n**į**ká, nąká	nąká	nąké
3sg	**i**gáč	(**h**)**į**kÁ ~ y**į**kÁ	yąká	yąká
1pl	įg**i**gábič	ųyą́kapi ~ ųy**í**kapi	ųyą́kapi	ųyą́kapi

The expected form would be *$ịwụ́ğA$ from Proto-Dakotan *$iwụ́ğA$. The development from w to y also affects the archaic verb $owá$ 'mark, write', which occurs only in derivatives for 'book, letter' ($okmÁ$'s/he writes' is the innovative verb in use) as seen in table 3 above. Eastern Assiniboine $wa'ówapi \sim wówapi$ 'book' (2c) aligns with Dakota, Lakota, and Stoney, while the reshaped form $wa'óyabi$ 'book' occurs as the sole form in the western dialect spoken in Canada and both the conservative and innovative forms occur in the transitional speech of Fort Belknap (Tom Shawl, p.c. 2021). The switch of w to y also occurs with the noun $othụ́ye$ 'town'(2d) (< Proto-Dakotan *$thụwą$ 'camp') recorded in Carry the Kettle.

The differences for 'lie down; sleep on' (2e) also evolved from a doublet in Proto-Mississippi Valley Siouan *$wụ́kE \sim$ *$yụ́kE$, which is continued in Proto-Dakotan as *$wąkÁ \sim$ *$yụká$. Table 5 displays the comparative data for this verb. Eastern Assiniboine has $wụkÁ$, which seems to blend the historical doublet, while reflexes in Western Assiniboine ($yụkÁ$) and Lakota ($iyụ́kA$) are direct descendants of Proto-Dakotan *$yụká$. The oldest Stoney reflex recorded in nineteenth century word lists for this verb is ⟨ewanga⟩ $iwága$ (in Henry's 1808 journal [in Coues 1897]), while the modern Stoney form is $mąkhą́n ịgá$ 'lie down'. This may indicate competing variants in the language spoken in the eighteenth century and a switch to the compound $mąkhą́n ịgá$ in the course of the nineteenth century.

The comparative data for 'bed' are chaotic. This noun has been reconstructed in Proto-Dakotan as *$owų́kA$ (with locative *o-), a form that is continued in Eastern Assiniboine as $owų́ka$. However, the western dialect has $ową́ka$ (derived from Proto-Dakotan *$wąkÁ$). This noun may be borrowed from Dakota $ową́ka$ 'a place to lie on, a place where persons sleep; a floor; a place of pitching a tent, the ground' (Riggs 1992 [1890]), since the verb $wąkÁ$ does not exist in Assiniboine. Lakota $oyụ́ke$ seems to be the result of a blend between two historical forms of the verb 'lie down; sleep on' seen above. Lastly, Stoney has $owị́ga$ 'bed' ($o'íga$ as recorded by Taylor 1983:36), which derived from $ịgá$ 'stay' (with the locative prefix o- and epenthetic w or '), although there is also a variant $owụ́ka$ 'bed' that matches Proto-Dakotan.

TABLE 5
WĄKÁ, YŲKÁ 'LIE DOWN'

	W. Assiniboine (Canada)	W. Assiniboine (USA) / E. Assiniboine	Santee Dakota	Lakota
1sg	mųká	mųká	mųká	imų́ke
2sg	nųká	nųká	nųká	inų́ke
3sg	**yų**ká	**yų**ká ~ **wų**ká	**wą**ká	iyų́ka
1pl	ųyų́kapi	ųyų́kapi ~ ųwų́kapi	ųw**ą́**kapi	ųkíyųkapi

The speech of Fort Belknap also innovates for (2g) *khówa* 'and, also' (with unexpected *w*) when compared to the rest of the data, but it might also be an idiosyncratic form. The derived noun for 'cow' also shows an innovation from *y* to *w*, but this time in Assiniboine in general. Since this noun is a compound made of *pté* 'buffalo' and the verb *wanúyą* 'to be tamed' (based on Lakota *ptewániyąpi* and Santee *ptewánuyąpi*) and that a form with *y* occurs in Carry the Kettle (*wanúyapi* 'small, domesticated animal'), I consider the Assiniboine form *ptewánuwa* to be an early innovation. Stoney has a completely different compound *thathą̀ħnéya* 'cow', derived from older *thathą́ga ħneħnéya* 'spotted buffalo'.

Lastly, the verb for 's/he knows' (2h) (which is a distinctive marker of dialectal differences invoked by speakers) has two reshaped forms (*snokyÁ*, *snohyÁ*) along with a conservative form *snonyÁ*. Table 6 provides the comparative data for this basic verb and the possessive derivative in *-ki-*, *snonkíyA* 's/he knows his/her own'.

The conservative form of this verb is *snonyÁ* 's/he knows it', and it occurs in the speech of speakers from Fort Belknap and White Bear born at the beginning of the twentieth century; *snokyÁ* is the modern innovative variant used in Fort Belknap and the sole form occurring in the western dialect, while *snohyÁ* is an innovative allegro speech form only used in the eastern dialect. Again, as seen above, the Fort Belknap dialect is transitional between the conservative form in *n* and the innovative forms in *k* and *h*. Parks and DeMallie (2012:181n84) proposed that this verb evolved as follow: *snokyÁ* > *snonyÁ* > *snohyÁ*. This is implausible for two reasons. First, the *k* and *h* forms are clearly innovations from the more conservative *snonyÁ*, which is the expected match for Lakota *slolyÁ*. These cognates are from an earlier Proto-Dakotan form with **R* (> *l*, *d*, *n*). Second, there are no sound changes that can explain the shift of an earlier *n* to *k*, *h* besides postulating an ad hoc change. A more plausible explanation considers the historical morphophonemic behavior of this verb.

Even though in *snonyÁ* and *snokyÁ*, the last syllable *-yA*—which resembles the causative *-yA*—can be segmented, it is not felt as an independent morpheme anymore. It is simply the final part of the discontinuous stem, while *snon-* or *snok-* is the initial part, although this initial part does not occur in isolation either. The discontinuity of this stem is evidenced by the fact that person markers for speech act participants are infixed (e.g., *snok-wá-ya* 'I know him/her/it') while other elements, like the causative *-khiyA*, are suffixed after *-yA* (e.g., *snokyékhiyA* 's/he lets somebody know it; lets it be known'). When other derivatives like the reciprocal *-kičhi-* or the possessive *-ki-* are added, the original **d* of the historical stem surfaces as *t* as in *snot-kí-yA* 's/he knows his/her own'; this is so because voicing of intervocalic stops is blocked. Here we can see that a sequence *tk* appears on a morpheme boundary. Although metathesis

TABLE 6
SNONYÁ, SNOKYÁ, SNOHYÁ 'S/HE KNOWS'

	Assiniboine			Dakota		
	western (Canada)	western (USA)	eastern	Yankton	Santee	Lakota
basic	sno**ky**Á	sno**ny**Á ~ sno**ky**Á	sno**ny**Á ~ sno**hy**Á	s**d**o**ny**Á	sno**ty**Á	s**l**o**ly**Á
possessive derivative	snok**k**iyA	sno**t**kiyA	sno**t**kiyA	s**d**o**n**kiyA		s**l**o**l**kiyA

does not usually operate on morpheme boundaries, it does in some rare instances when the elements involved are not recognizable anymore. An example of this is the lexicalized name for 'American robin'. In Carry the Kettle I recorded *makhú-ša* (lit. red-breast) and *čhątkhúša* (with *čhąté > čhąt-* 'heart' + *khu* (?) and *ša* 'red'). However, it appears that for some speakers the meaning of this compound was lost, and so metathesis of *tk > kt* could apply, resulting in *čhąktúša*. Another example is the third person possessive for 'father'. The fully inflected form is *atkúku* 'his/her father' in the eastern dialect. It is composed of *até* 'my father', on which was added the third person possessor *-ku-* to create the non-speech act participant stem *atkú-*, which is then inflected like a regular kinship term *atkú-ku* 'his/her father'. However, in the western dialect metathesis sometimes operates on old morpheme boundaries that are not felt as such anymore (*atkú-ku > aktú-ku* 'his/her father'). The Stoney cognate *aktú* 'his/her father' shows that metathesis can also operate on morpheme boundaries.

My hypothesis is that metathesis occurred historically on the possessive form *snotkíyA* to yield **snoktíyA* (an unattested form). However, since the morpheme boundary is still active synchronically (as shown above with *snok-wá-ya* 'I know him'), the sequence *kt* underwent progressive assimilation in *kk* to preserve the morpheme boundary and meaning of the possessive derivative *-ki-*. The conservative verb *snonyÁ* was then reshaped into *snokyÁ* by back formation from the assimilated possessive form *snokkíyA*. In other communities *snokyÁ* (Western Assiniboine) was weakened in fast speech as *snohyÁ* (Eastern Assiniboine) and finally dropped in Stoney (*θnoyá*).

3.3. Pragmatic isogloss (item 3). The exclusive usage by male speakers of the interrogative particle *he* (*Tká he?* 'Is it heavy?') is reported for the eastern dialect (Fort Peck, White Bear, Ocean Man, and Pheasant Rump). It is a well-known marker of dialectal differences in Assiniboine communities. To express interrogation women use a rising intonation as in *Nistústa?* 'Are you tired?', much like in English. In the western dialect the interrogative particle *he* is used by both speakers of both genders.

3.4. Lexical isoglosses (items 4–9). For *šakówį* 'seven' (4) Edwin Denig recorded ⟨shakkowee⟩ *šakówį* alone (2000[1930]:24) but also both ⟨Shak kó wee⟩ *šakówį* and ⟨u she nah⟩ *iyúšna* 'the odd number' (Denig 1854:429). The form *iyúšna*, which is cognate with Lakota *iyúšna* 'odd, one without a mate' (Ullrich 2008), is an innovation, since Denig only reports the conservative term ⟨Ak kai shak ka⟩ *akéšakowį* for 'seventeen'. Currently *iyúšna* 'seven' has become the more widespread form in Fort Belknap (Parks and DeMallie 2012:156n13) and Fort Peck (Michael Turcotte, p.c. 2021), while it is the only one used in Carry the Kettle and Mosquito-Grizzly Bear Head. In the eastern dialect spoken in Canada *šakówį* 'seven' is used.

For 'walking cane' (5) we find two forms in the eastern dialect: *sakyé* in White Bear and both *sakyé* and *sakné* in Fort Peck. The former may be a Dakota or Lakota loanword, *sagyé* (with devoicing of *g* into *k*), while the latter matches the western dialect. Hollow (1970:297) proposes that *sakyé* is derived from *sáka* 'it is dry' (contracted to *sak-*) and *-yA* 'causative' (with nominalizing ablaut of *a* into *e*). Stoney *θąhné* is close to Western Assiniboine *sakné*, although **θahné* (with an oral *a*) would be expected.

For 'left hand' (6) reflexes of Proto-Dakotan **čhatká* are *čhaktá* (Western Assiniboine spoken in Canada), *čhaktá* (Stoney) (both of which display metathesis), *čhatká* (eastern dialect, including Fort Belknap), and Lakota *čhatká*. However, there is an odd variant *swéphatahą* that occurs in the eastern dialect spoken at Fort Peck, as documented by Hollow (1970:296), but it is now in competition with the widespread *čhatká* (Mike Turcotte, p.c. 2021). The rare consonant cluster *sw* is problematic and probably underwent both precope of a vowel (which would explain stress on the first syllable) and contraction. I suspect this item was borrowed from neighboring Dakota. There are two possible Dakota sources for this loanword, but both are in a relationship of homophony. My initial hypothesis was that it could be a fast speech contraction of *ąspé'aphatąhą* 'at the right hand' (with *sp > sw* and a semantic shift from 'right' to 'left'). Riggs (1992 [1890]:378) suggests that the root is *ąspé* 'to know how' (metaphorically, right is the side of knowledge). However, the noun *ąspé* 'axe' has the same shape, which leads me to think that the source could in fact be *ąspé'aphatąhą* 'at the axe hand'. The extension and metonymic shift in meaning is strange indeed, but it may be motivated by the personal name of a famous Assiniboine chief. When the American fur trader Edwin Denig lived along the Upper Missouri River among the Assiniboine, he came into contact with some important chiefs. Due to its location around Fort Union, North Dakota, it is likely that some of these chiefs spoke the eastern dialect of Assiniboine. One chief called the Gauche (a French noun phrase that means 'the left-handed') played an important political role in the region during that time. Although the Gauche does not appear in Denig's report (2000[1930]), it is possible that his Assiniboine name referred to the fact that he held his war axe in his left hand, hence the semantic switch from 'axe side' to 'left hand'. Obviously, this is a speculation that deserves more research.

I recorded two nouns for 'African American' (7): *Wašíču sápa* (lit. "black Whiteman") and *Hásapa* (lit. "black skin"). I do not know which term is the oldest, but some speakers of Fort Peck (Eastern Assiniboine) consider *Hásapa* to be a Siouanism, while it is the only form recorded in Western Assiniboine (except in Mosquito-Grizzly Bear Head, where *Wašíču sápa* is used) and in Lakota. Prince Maximilian has ⟨hatsáhpa⟩, which could be a Siouanism or simply a new coining. According to Roth (1975:119), Lakota *Wasíču sápa ~ Wašíčų*

sápa is the older term for 'Blackman, African' and expresses skin pigmentation and social role/status. He suggests that African Americans

> represented white authority, carried white man's guns, wore white man's uniforms. The black did not come alone but with the white man from the very beginning and, virtually always since, in his company. Still today the black man comes to the reservation under the banner of the Bureau of Indian Affairs, filling jobs that probably once were filled by whites, teaching as whites do in the federal schools, fulfilling the goals of that which is primarily a white man's society, white man's government. (Roth 1975:119)

Roth suggests *Hásapa* came into use later since it expresses only skin pigmentation (and aligns with the Euro-American way of designating other groups) and nothing about past social statuses and roles.

Item (8) represents a semantic isogloss since the speakers of Eastern Assiniboine have extended the meaning of their cognate of Lakota *skéča* 'fisher' to 'otter' (8),[12] both of which are members of the *Mustelidae* family. As shown by Taylor (1983:34), this type of semantic extension is typical of animal nomenclature in Stoney where the instability of animal nouns may be due to a "new cultural relationship with animals which the fur trade initiated." In the eastern Canadian dialect this noun was resyllabified by inserting *i* with a shift of accent to the second syllable (*škéča* > *šikéča*). As a result, *k* became flanked by vowels and underwent velar palatalization to *č* (*šikéča* > *šičéča*). These changes occurred in the last hundred years, since nineteenth-century Assiniboine word lists have the unchanged form only: ⟨pe tùn⟩ 'otter' and ⟨ska chàh⟩ 'fisher' occur in Denig's (1854:4) vocabulary.

Lastly, item (9) for 'wolf' has three distinct forms in the Dakotan group that reflect either its relationship with humans or its physical appearance. All are built on the contracted noun *šųk-* 'canine' (from *šúka*); Lakota has *šųkmánitu* 'coyote, wolf' (with *manitu* 'wilderness') and also *šųkmánitu tȟáka* 'wolf' (lit. 'big coyote'), while Dakota and Assiniboine in general have *šųkthókeča* with *thó* 'be blue' and the suffix *-keča* 'approximative, sort of' (lit. 'bluish dog'). The Western Assiniboine variant *šųkthókena* (with *thókA* 'enemy' followed by the nominalizer *-na*) was recorded in Carry the Kettle, and it is a perfect match for Stoney *šįktóga* (as recorded by Laurie 1959:90; this form shows a change of unstressed *ų* to *į*). However, modern Stoney has *šį́ktogéǰa*, which matches the general form in Assiniboine and Dakota.

To sum up the findings presented in this section, the following observations can be made (numbers refer to those of table 3 above). First, there is no major phonological differentiation and no mutual unintelligibility between the

---

[12] For Stoney, Corey Telfer (p.c. 2021) provides the noun *θįdé gaphéya* for 'otter', but Taylor (1983:34) recorded it with the meaning 'fisher' and has *įptèbiján* for 'otter' instead.

Assiniboine dialects. This means that Assiniboine was spoken as a relatively unified language in the recent past and that speakers from the two dialects were in contact with one another despite the wide geographical distribution of the language (see Parks and Rankin 2001:196). For instance, there is no single phoneme in Proto-Dakotan that yields different reflexes in the two dialects of Assiniboine, unlike in Cree dialectology where five dialects are distinguished on the basis of their reflexes of Proto-Algonquian *r, namely *y*, *n*, *l*, *r*, and ð. I did not find anything similar in Assiniboine. Second, metathesis (1) occurs only in the western dialect spoken in Carry the Kettle and Mosquito-Grizzly Bear Head and in Stoney, suggesting that speakers of the western dialect were in contact with Stoney more intensively than speakers of the eastern dialect, where it does not occur, even in nineteenth-century Assiniboine word lists.[13] The western dialect also shows innovation in the form of phonological stem reshaping involving a modification of its reflexes of Proto-Dakotan *w or *y. This is not found in the more conservative eastern dialect (2c, d). Third, the speech of Fort Belknap is a transitional subdialect, since it does not share many non-lexical isoglosses with the western dialect (except for 2h) and aligns in this respect on the more conservative eastern dialect (2a, b, c, d, e), although on the basis of lexical differentiation only (4 to 8) Fort Belknap speech is more similar to the speech of Carry the Kettle, as proposed by Cumberland (2005:36n16). Its transitional status may be due to the fact that the community of Fort Belknap comprises people belonging to different historical bands (Tom Shawl, p.c. 2021). For example, the *Wazíyam wįčhášta* 'Northern People' moved to Fort Belknap in the nineteenth-century and they were named as such after their migration southward (Rodnick 1937:411). Fourth, Eastern Assiniboine is more innovative for lexical isoglosses than elsewhere, since we find: (a) coining of new words (7), (b) extending the meaning of some words (8), and (c) borrowing words (5) from speakers' Dakota neighbors with whom they have cohabited since the nineteenth century.

4. Structural significance of isoglosses.   The comparative analysis of isoglosses presented in **3** offers new insights to some well-known landmarks of Assiniboine dialectology (as presented by Parks and DeMallie 1992) as well as bringing in new non-lexical isoglosses. However, isoglosses are not equally important in dialectology. The structural significance of isoglosses pertains to grading their importance in establishing dialectal differentiation. Typically,

---

[13] To this effect Taylor (1981:10) notes that Stoney is "closest in every way to the dying Assiniboine speech of western Saskatchewan. They differ more from the Assiniboine spoken in eastern Saskatchewan and in Montana, although the Morley dialect of Alberta Assiniboine . . . shows many contacts with the Assiniboine dialect of the Fort Belknap Reservation in north-central Montana."

phonological and morphological isoglosses will be given more importance than lexical and syntactic isoglosses. However, the concept of structural significance and its utility have been criticized for their lack of defining criteria, although many of the critics agree that not all isoglosses should be given the same weight in dialectal differentiation. For example, while Chambers and Trudgill (1988:112–14) overtly reject the concept of structural significance of isoglosses, they nevertheless admit that lexical isoglosses are more superficial than phonological ones, since the former are "subject to self-conscious control or change." While Ivić (1962:48) states that grading the importance of linguistic features is hard to accomplish, he nevertheless provides two general criteria to do so: *material size of the difference* and *word frequency*.

The material size of a difference states that two unrelated stems (4; *šakówį* vs. *iyúšna* 'seven') have greater structural significance than other pairs that display few or only one sound difference (5; *sakyé* vs, *sakné* 'walking cane'). Moreover, we can add that a lexical isogloss like (7), which is based only on a variant occurring in one community (i.e., *čhatká ~ swéphatahą* in the eastern dialect of Fort Peck), appears to be of lesser significance than materially distinct lexical variants like (4) 'seven', which have nothing in common phonologically besides occurring in more than one community.

The other criterion is frequency of words in the spoken chain. Ivić (1962:48) states that "[a] difference concerning many words is obviously more important than a difference affecting two or three rather rare words." Applied to Assiniboine dialectology, high- or relatively high-frequency verbs that show phonological reshaping—like those in (2) and especially 'sit' (2a)[14] but also 'ask' (2b) and 'know' (2h)—will obviously be given more significance than a lexical isogloss like 'walking cane' (5) or a semantic extension like 'fisher' to 'otter' (8), since these words are less frequent than basic verbs. Thus, phonological reshaping is more significant, simply because it affects more items than single lexical isoglosses. Six are reported in the present study, but the number is likely higher than that. An example not discussed in this article is the verb *thawúkhašį* 's/he dreads it; is reluctant' in Eastern Assiniboine and Fort Belknap but *thayúkhašį* in Western Assiniboine spoken in Carry the Kettle and *thawą́kašni* 's/he is not disposed to' in Dakota (Riggs 1992 [1890]).

In my view, these two defining criteria are robust since they are quantitative in nature (i.e., difference in the quantity of occurrences in the stream of speech and difference in the quantity of identical phonemes). Moreover, they also provide some insight for Dakotan dialectology in general since another major sound change, namely the development of long vowels in Stoney spoken in Alexis, Alberta (a dialect not discussed in the present article), stems

---

[14] This positional verb is homophonous with an auxiliary verb that indicates continuous aspect and that exhibits identical variants (Cumberland 2005:404).

from a diachronic rule of glide deletion where vowels in hiatus are contracted into phonemically long vowels (Taylor 1981:11; e.g., *tòòbá* 'door' < *thiyópa* [Rhyassen Erdman 1997:14]). Stoney also has long vowels, primarily from the deletion of *y* and *g* between *a_a* (e.g., *wayatábi ~ waatábi* 'table' and *huyága ~ huyáá* 'to see something'; I wish to thank a reviewer for suggesting these examples). This is a vector of sound change that is still a surface phenomenon in Western Assiniboine (e.g., *thiyópa ~ thi'ópa* 'door' and *iyúǧA ~ i'úǧA* 'ask' in table 3 above)[15] and in Lakota (e.g., *mitȟáwa* 'mine' in slow speech but [mitȟɔ́:] in fast speech; Ullrich and Black Bear 2016:480). Taylor (1981:11) suggests glide deletion is a shared archaism that could go back to Proto-Dakotan. What is crucial here is that since the development of long vowels (and likely also the innovative stress shift; see Shaw 1985) is in part responsible for mutual unintelligibility of Stoney within the Dakotan group, it is clear that such a diachronic rule and the similar phonological reshaping of W-stems or historical doublets (seen in Western Assiniboine) are more significant—in the long run—in the formation of dialectal divisions than lexical isoglosses involving infrequent words.

5. Conclusion. This article has two objectives. The first objective is to review the methods and results underlying the genetic relationship between Stoney and Assiniboine in the light of historical and comparative data. While Harbeck (1969) and later Parks and DeMallie (1992) suggest that Stoney split off from the Dakotan at an early date, I advocate that this is not the case, since many of the sound changes and lexical differentiation that account for Stoney's distinctiveness and mutual unintelligibility (with Assiniboine) are shallow diachronically and have developed for the most part in the last 350 years or so. Logically these changes cannot serve to sustain an early and independent of Stoney from Assiniboine. Instead I claim that Stoney and Assiniboine descend from a common ancestor (Proto-Nakoda), as shown by a number of shared innovations, a subgrouping originally proposed by Ullrich (2018:35).

The second objective is to provide new data on Assiniboine dialectal differences (i.e., phonological reshaping of stems) and to shed some light on dialectal divisions but with a comparative and historical perspective. More precisely I show that the western dialect spoken in western Saskatchewan (and in the transitional speech of Fort Belknap) displays many non-lexical innovations and shares some phonological innovations like metathesis of *kt* with Stoney, while the eastern dialect spoken in eastern Saskatchewan and Montana is more conservative and aligns in many respects with Dakota and Lakota. Finally, even though some dialectologists may find that grading the significance of

---

[15] See Cumberland (2005:50) for a discussion of glottal stop deletion in fast speech in Assiniboine.

isoglosses is a suspicious procedure, I believe that the defining criteria provided by Ivić (1962) (i.e., word frequency and material size) and the discovery of phonological stem reshaping in Assiniboine are keystones for a deeper understanding of Dakotan dialectology and the direction of sound changes, the reason being that this kind of development has the potential to reshape vocalic systems entirely and to create deep dialectal divisions and mutual unintelligibility as is now the case with modern Stoney compared to the rest of the Dakotan group.

REFERENCES

BELLAM, ERNEST. 1975. Studies in Stoney morphology and phonology. MA thesis, University of Calgary.

BLEVINS, JULIETTE, ANDER EGURTZEGI, AND JAN ULLRICH. 2020. Final obstruent voicing in Lakota: Phonetic evidence and phonological implications. Language 96(2):294–337.

CAMPBELL, LYLE. 2013. Historical Linguistics. 3rd ed. Edinburgh: Edinburgh University Press.

CHAMBERS, JACK K., AND PETER TRUDGILL. 1988. Dialectology. Cambridge: Cambridge University Press.

COLLETTE, VINCENT, AND WILMA KENNEDY. Forthcoming. A Concise Dictionary of Nakoda (Assiniboine). Lincoln: University of Nebraska Press.

COUES, ELLIOT (ED.). 1897. New Light on the Early History of the Great Northwest: The Manuscript Journals of Alexander Henry and of David Thompson, 1799–1814. New York: Francis P. Harper.

CUMBERLAND, LINDA A. 2005. A grammar of Assiniboine: A Siouan language of the northern plains. PhD dissertation, Indiana University.

DENIG, EDWIN T. 1854. Assiniboine vocabulary. Historical and Statistical Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States: Collected and Prepared under the Direction of the Bureau of Indian Affairs per Act of Congress of March 3rd 1847, vol. 4, ed. Henry R. Schoolcraft, 416–31. Washington, DC: Historical American Indian Press.

———. 2000 [1930]. The Assiniboine. Ed. John Napoleon Brinton Hewitt. Norman: University of Oklahoma Press.

DRUMMOND, VALERIE E. 1976. Carry-the-Kettle Assiniboine texts. MA thesis, University of Toronto.

FOURSTAR, JEROME. 1978. Assiniboine Dictionary. Wolf Point, MT: Privately published.

HARBECK, WARREN. 1969. A study in mutual intelligibility and linguistic separation among five Siouan languages. Mss. 497-3. Philadelphia: American Philosophical Society Library.

———. 1973. The Stoney Cultural Education Program. Paper presented at the Northern, Cross-Cultural Education Symposium: Needs and Resources, Fairbanks.

HAYDEN, FERDINAND V. 1863. Contributions to the ethnography and philology of the Indian tribes of the Missouri Valley. Transactions of the American Philosophical Society 12(2):231–461.

HOLLOW, ROBERT C., JR. 1970. A note on Assiniboine phonology. International Journal of American Linguistics 36(4):296–98.

IVIĆ, PAVLE. 1962. On the structure of dialectal differentiation. Word 18(1–3):33–53.

LAURIE, JOHN. 1959. Dictionary of the Stoney Language. Calgary: Glenbow Foundation.

MANITOBA CULTURE, HERITAGE AND RECREATION, HISTORIC RESOURCES BRANCH. 1997. Assiniboin (Nakota) First Nation. Winnipeg: Manitoba Culture, Heritage and Recreation, Historic Resources Branch.

MILLS, TIMOTHY I. 2000. Morley Stoney nasal phenomena in functional phonology. BA thesis, University of Calgary.

PARKS, DOUGLAS R., AND RAYMOND J. DEMALLIE. 1992. Sioux, Assiniboine, and Stoney dialects: A classification. Anthropological Linguistics 34(1/4):233−55.

———. (EDS). 2012. Assiniboine Narratives from Fort Belknap, Montana. Stories Told by Rose Weasel. Part 1. Interlinear Texts. Bloomington: American Indian Studies Research Institute.

PARKS, DOUGLAS R., AND ROBERT L. RANKIN. 2001. Siouan languages. Handbook of North American Indians, vol. 13, Plains, ed. Raymond J. DeMallie, 94–114. Washington, DC: Smithsonian Institution.

PENTLAND, DAVID H. 1979. Causes of rapid phonological change: The case of Atsina and its relatives. Calgary Working Papers in Linguistics 5:99–138.

RANKIN, ROBERT L., RICHARD T. CARTER, WESLEY A. JONES, JOHN E. KOONTZ, DAVID S. ROOD, AND IREN HARTMANN (EDS.). 2015. Comparative Siouan Dictionary. Leipzig: Max Planck Institute for Evolutionary Anthropology (http://csd.clld.org).

RAY, ARTHUR J. 1974. Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay, 1660–1870. Toronto: University of Toronto Press.

RHYASEN ERDMAN, CORRIE LEE. 1997. Stress in Stoney. MA thesis, University of Calgary.

RICH, EDWIN ERNEST. 1949. James Isham's Observations on Hudson's Bay, 1743–49. Toronto: Champlain Society.

RIGGS, STEPHEN RETURN. 1992 [1890]. A Dakota-English Dictionary. Ed. James Owen Dorsey. Washington, DC: Department of the Interior, Government Printing Office.

RODNICK, DENNIS. 1937. Political Structure and Status among the Assiniboine Indians. American Anthropologist, n.s. 39:408–16.

ROTH, DAVID D. 1975. Lakota Sioux terms for white and Negro. Plains Anthropologist 20(68): 117–20.

RUSSELL, DALE R. 1990. The 18th century western Cree and their neighbors: Identity and territory. MA thesis, University of Saskatchewan.

RYAN, KENNY. 1998. Nakona Language. Fort Peck, MT: Fort Peck Community College.

SHAW, PATRICIA A. 1985. Coexistent and competing stress rules in Stoney (Dakota). International Journal of American Linguistics 51(1):1–18.

STONEY EDUCATION AUTHORITY. 2022. Stoney Dictionary Online (https://dictionary.stoneynakoda.org).

TAYLOR, ALLAN R. 1981. Variations in Canadian Assiniboine. Siouan and Caddoan Linguistics Newsletter, July 1981:9–16.

———. 1983. Old vocabularies and linguistic research: The case of Assiniboine. Napao: A Saskatchewan Anthropology Journal 13:31–44.

THWAITES, REUBEN GOLD. 1906. Early western travels 1748–1846: A Series of Annotated Reprints of Some of the Best and Rarest Contemporary Volumes of Travel, Descriptive of the Aborigines and Social and Economic Conditions in the Middle and Far West, during the Period of Early American Settlement. Maximilian Prince of Wied's Travels in the Interior of North America, 1832–1834, vol. 24, pt. 3. Cleveland: Arthur H. Clark.

ULLRICH, JAN F. (ED.). 2008. New Lakota dictionary: Lakȟótiyapi-English, English-Lakȟótiyapi and incorporating the Dakota dialects of Yankton-Yanktonai and Santee-Sisseton. 2d ed. Bloomington and Pierre: Lakota Language Consortium.

———. 2018. Modification, secondary predication and multi-verb constructions in Lakota. PhD dissertation, Heinrich-Heine-Universität Düsseldorf.

ULLRICH, JAN F., WITH BLACK BEAR, BEN, JR. 2016. Lakota Grammar Handbook: A Pedagogically Orientated Self-Study Reference and Practice Book for Beginner to Upper-Intermediate Students. Bloomington: Lakota Language Consortium.

UMFREVILLE, EDWARD. 1795. The Present State of Hudson's Bay. London: Charles Stalker.

WOLVENGREY, AROK, AND FREDA AHENAKEW (EDS.). 2001. Nehiyawewin, vol. 3, Itwewina. Regina: University of Regina Press.