

## OTHER SOUND CHANGES

When a word is modified by some grammatical process (say attaching an affix), oftentimes the word can change slightly in form or pronunciation. While the particulars of what kind of changes actually occur differs wildly from language to language, these kind of processes happen in English just as in Dakota, so we will look at a few of those first.

As English words are often not spelled how they sound; oftentimes the changes that occur are obscured by the writing system. Probably the prime examples of this are the English plural marker *-s* and the past tense *-ed*. The plural is pronounced three distinct ways, either as *s*, *z* or *iz*. This can be seen in the three words *cats*, *dogs*, and *busses* which would phonetically be *kæts*, *dawgz*, and *busiz*. Likewise, the past tense can be pronounced either *t*, *d*, or *id*; consider *helped*, *cooled*, and *repeated*, phonetically *helpɪt*, *kuld*, *ripitid*.

Another English example is the prefix *in-*, meaning *not*, such as *inable*, or *inevitable*. This prefix changes form depending on the word it is attached to; we say *impossible*, not *inpossible*, it is not *inregular*, but *irregular*, and of course things are never *inlegal*, but *illegal*.

### VOWEL LOSS

So, what kind of sound changes actually occur in Dakota? Probably the most common is the dropping of final vowels, and the subsequent changes that occur to the (now word-final) consonants. Remembering

back to the chapter on words; Dakota words can either be contracting or non-contracting; where contracting words sometimes lose their final vowels. This occurs in the following situations.

If two words are closely associated in a sentence and work together to form a unit, the first will often drop its final vowel.

iwóhdakA + maší	wanjáŋkA + wahí	škátA + maŋké
iwóhdag maší	wanjáŋg wahí	škád maŋké
He told me to talk about it.	I went to see him.	I was playing.

If a compound noun is made of two different words (either joined to form a single word, or remaining separate), the first word will often drop its final vowel, and modify the consonant accordingly.

dakhóta + wičhóh'anj	máza + ohnáke	šúŋka + manítu
dakhód wičhóh'anj	maswóhnake	šúŋng:mánitu
the Dakota way of life	can (of food)	a wolf

When contracting words reduplicate they undergo a similar process:

sápa + sápa	théča + théča	héchheča + cheča	idéŋga+deŋga
sab:sápa	thek:théča	héchhek:čeča	idéh:deŋga
black	new	it is like that	it shines

Another spot where vowel loss often occurs is the suffix *-pi* itself, which is reduced to either *-b* or *-p*.

yútapi	yútap	yútab
They ate it.		

This *p/b* can further change to an *m* if the preceding vowel is nasal: for example *šparyáŋm*

As can be seen in the examples above, when a final vowel is dropped the preceding consonant also undergoes a change. The changes that occur usually fall into a nice pattern: voiced consonants like *z*, *ǰ* become their voiceless counterparts *s*, *h*, and vice versa: voiceless consonants like *t*, *k* become voiced: *d*, *g*. Of course, there are exceptions to this general pattern (the Dakota consonant *č* does not have a voiced form, so it must become something else); and the full table is below.

č	d	šíče	šíd ayé
č	g	síče	šig:šíče
p	b	ksápe	ksab:ič'iye kte
t	d	phéta	phed-okšán ɣɛŋkápi
k	g	waš'áke	wašág:ič'ičiye
z	s	yúze	yús ayé
ž	š	owíŋža	owíŋš-phikiye
ğ	ñ	káge	kañ-waší

When a contraction like this occurs before a word ending in a vowel, the final consonant remains syllable final, and does not 'jump' to the beginning of the next word. Instead, a glottal stop is inserted immediately before the vowel, preserving the syllable break

škáta + ománi	škad:ómani
to play + to travel	He goes about playing.

The other possibility, \*ška-dómani, never occurs.

Nasal vowels may affect this consonant-changing process; if after vowel-deletion a consonant ends up at the end of a syllable containing a nasal vowel; this consonant often changes to its nasal-counterpart; either *m*, *n* or *ng*. A table of consonants with their corresponding nasals is below.

ORIGINAL CONSONANT	NASAL COUNTERPART
b, p, ph	m
d, t, th	n
g, k, kh	ng

Here are some examples of this process occurring:

hánpa / háŋm	čhaŋhánípi / čhaŋháním	šúŋka / šúŋng
shoe	sugar	dog

The verb *ínyan̄ka*, or *to run*, owes part of its irregular conjugation to the effects of nasalization. This verb double conjugates, both changing the *y* to *bd* and prefixing *wa-* to create the "I" form, which would then be

expected to be \**waiŋbdan̄ke*. However the presence of two nasal vowels surrounding the consonant cluster *bd* is enough to force each of these consonants to change into their nasal counterparts; and we get *waiŋmnan̄ke* instead. Some of the conjugates of this irregular verb appear below.

waiŋmnan̄ke	yaíŋnan̄ke	uŋkíyan̄kapi	íŋyan̄ke
I ran.	You ran.	We ran.	He ran.

This process is much more common in the Lakota dialect than in Dakota, for Lakota has an additional ablaut where changeable *A*'s become *ij* in certain circumstances: for instance before the future enclitic *kte*. Thus, while the verb *ya*, meaning *to go*, conjugates as *blé*, *I go*, in Lakota, it becomes *mníj kte*, or *I will go* in the future tense. As Dakota does not have this ablaut, these kind of changes in verb conjugation do not occur.

## NASALIZATION SPREAD

Nasalization spread is the process by which one nasalized vowel causes other nearby vowels to become nasalized as well. An example of this process is the word *španyán̄*, which comes from the word *špan̄*, together with the causative suffix *ya*. When this *ya* follows the nasal *an̄*, it also becomes nasalized.

špán̄ + ya	than̄íj + ya	sán̄ + ya
španyán̄	than̄íjyan̄	sanyán̄
to cook	to make visible	to whiten

This kind of nasalization spread can occur whenever a syllable which consists of a *glide + vowel* that has a nasal form occurs before or after a syllable with a nasal vowel already in it. The list of such nasalizable syllables are *ya*, *yí*, *yu*, *wa*, *wí*, *wu*, *ha*, *hi*, *hu*. Some further examples are below:

wa+wanyán̄ka	uŋ-pi + iyéya	uŋ-pi + ská + ya
wanyán̄ke	iyéuŋyan̄pi	skáuŋyan̄pi
He saw.	We found it.	We made it white.

There are a few exceptions to this, the most notable being that if the syllable *yu* occurs as the instrumental prefix meaning *to cause*, nasalization is blocked and it never becomes *yurj*.

yuwášte	uŋyúwaštepi	yuŋíče	uŋyúŋíčapi
He corrected it.	We corrected it.	He woke her up.	We woke her up.

Furthermore, the spread of nasalization can be blocked by intervening consonants, a process which is apparent when looking at *bd*-cores. Take *wanŋaŋka*, *to see*, for example. While in its usual form we can see that this verb has two nasalized vowels; in fact only the first vowel is actually nasal underlyingly, and the syllable *ŋaŋ* appears nasalized due to nasalization spread. Looking at some conjugated forms of the verb confirms this;

wanŋaŋke	wanŋbdáke	wanŋdáke	wanŋwíčhayake
He saw her.	I saw her.	You saw her.	He saw them.

An occasional exception here would be the pronunciation *wančhíyáŋke*

A process much like nasalization spread also occurs in the forming of adverbs from cores, using the suffix *-ya*. Some examples of adverbs created in this way are as follows:

wakhánj + ya	yuónihaŋj + ya	ohómni + ya	óthaŋiŋj + ya
wakhánŋyaŋ	yuónihaŋyaŋ	ohómniyaŋ	óthaŋiŋyaŋ
sacredly	respectfully	encircling	visibly

This suffix can also be attached to negative verbs (verbs which have *šni* attached to them), and in this case it also becomes *ŋaŋ*, the nasal vowel occurring as a result of the nasal *n* in *šni*.

wíyukčaŋ + šni + ya	sdodyÁ + šni + ya	špaŋ + šni + ya
wíyukčaŋšniyaŋ	sdodyéšniyaŋ	špaŋšniyaŋ
thoughtlessly	unknowingly	without cooking

## MULTIPLE VOWELS

When a grammatical process causes multiple vowels to occur next to each other within a word, multiple different processes can occur. The

most common is that both vowels are pronounced separately and independently, with a glottal stop inserted between them, much as when two vowels appear naturally adjacent within a word.

awáŋyaŋkA	waáwaŋyaŋkA	ié	oíe
to watch over it	to guard	to speak	word

Or, two one of the vowels may be absorbed into the other.

napé + ožaža	napóžaža	čhár + iŋkpá	čhiŋkpá
hand + washing place	sink	tree + tip	treetop

Alternatively, instead of a glottal stop sometimes the glides *w* or *y* are inserted between the two vowels

okápte	iyókapte	owá	wíyowa
to ladle something	a cup	to write something	pen

And, in other circumstances, two dissimilar vowels occurring adjacent to each other can merge, and form a single vowel different from either of the originals.

a+iyáya	éyaya	čhaŋ + ošóke	čhúŋšóke
"a" + to depart	to depart taking it	tree + thick	forest

Below is a table giving a list of pairs of vowels which can coalesce into a single vowel, as in the examples above.

ai	aiŋ/aŋiŋ	eo	aki	awo	aye	iye
a/e	iŋ	o	e	o	e/æ	e
aŋo	ao	oi/oioŋ	wayu	ohaŋ	awa	ihaŋ
uŋ	o	uŋ	wo	uŋ	a	iŋ

Of course, more important than which processes can actually occur is when they do occur; various situations are outlined below. The following is by no means meant to be a comprehensive listing of all the various sound changes which can occur when two vowels appear adjacent to each other, but instead just to be a list of examples, to give a feel for how these processes work.

## EXAMPLE: THE PREFIX WA-

When attached to a core, the prefix *wa-* usually takes the place of the receiver of the action; for example:

wan̄yán̄ke	wan̄wán̄yan̄ke	špan̄yé	wašpán̄ye
He sees it.	He sees.	He cooks it.	He cooks.

When the verb in question begins with an initial *a*, the resulting sequence *wa-a* does not contract, and a glottal stop is inserted between the two *a*'s so they are pronounced distinctly.

adí	waádi	aíe	waáie
He climbed over it.	He climbed.	He gossiped about it.	He gossips.
aphé	waáp̄he	ayáte	waáyate
He hit it.	He hit things.	He fortells it.	He fortells things.

This same prefix can occasionally create a noun when attached to a core however, where given a core *blah*, the noun has the meaning *one who blahs*. In this case, if the core begins with an initial *a*, the two sequential *a*'s actually do contract to a single accented *á*.

akáñpA	wákañpA	abdó	wábdo
to cover something	a sheet	shoulder blade	a type of blackbird
wan̄yán̄kA	wáwan̄yan̄kA	abdézA	wábdezA
He sees it.	a guard / watcher	He is observant.	an inspector

These last two examples are quite interesting to compare; the verb *wan̄yán̄kA* can be made either into the verb *wan̄wán̄yan̄kA*, meaning *he sees*, or into the noun *wán̄yan̄kA*, *a guard*. Likewise the verb *abdézA*, with the addition of *wa-*, can either form the verb *waábdezA*, or the noun *wábdezA*, words which are distinguished only by whether or not the prefix contracts.

While this may seem really strange at first, that a prefix sometimes contracts and sometimes does not depending on its usage, English does the same things, whether or not you've noticed it before! Consider the common phrase *going to*, which often contracts to *gonna*. For example, it would not sound strange at all to contract the sentence *I'm going to*

*go on a run* to *'m gonna go on a run*. This contraction can always happen when *going to* is used to express the future tense, but it never occurs in other cases. Think of how strange it would sound to contract *'m going to the store* to *'m gonna the store!* Languages often use this trick of sometimes contracting, sometimes not to distinguish two words with different meanings which would otherwise sound identical, which is exactly what English and Dakota have done in these cases.

Of course, there are exceptions to this rule, some verbs do in fact contract the prefix *wa-*, especially when the verb has an idiomatic meaning

anákiĥme	waánakiĥme	wánakiĥme
He hides his own.	He hides his own things.	He denies it.

Again, this helps distinguish the two verbs; the one with the expected meaning remains uncontracted, whereas the one with the less predictable meaning contracts. Some further examples of this are below:

ahdí	waáhdi	wáhdi
He brings it home.	He brings things home.	He comes back from a hunt.

akhítA	waákhita	wákhita
He's on the lookout for it.	He's looking for things.	He's watching (as a sentinel).

A verb can be made into a noun by the addition of the instrument prefix *i-*, and when *wa* is further attached to such a word it contracts to form the prefix *wi-*. The meaning of these prefixes is best illustrated by examples, as appear below.

yukpáŋ	iyúkpaŋ	wíyukpaŋ
He grinds it.	a thing for grinding something	a blender

khičhaŋAŋ	ikhičhaŋye	wíkhichhaŋye
He works with it.	a thing for working with	a tool

This same contraction process occurs when the prefix *wa* is simply attached to a verb beginning with an *i*, as seen below.

iwáŋge	wíwaŋge	iyáwa	wíyawa
He asks her it.	He questions her.	He appraised it.	He kept count.



This process, where one vowel is absorbed by another, occurs in many other circumstances, and so to follow this pattern we must leave the discussion of *wa-*, and move now to discuss vowel absorption in general.

### EXAMPLE: THE SEQUENCE AI

In many other cases in fact, when a prefix ending in *a* is attached to a verb beginning in *i*, the *a* is absorbed and the sequence *ai* becomes the single stressed vowel *i*.

wičhá + ité	wičhíte	wičhá + ištá	wičhíšta
man + face	a human face	man + eye	a human eye
tha + istó	thísto	tha + ištá	thíšta
buffalo's + leg	a buffalo's leg	buffalo's + eye	a buffalo's eye

This contraction of *ai* to *i* happens even in the forming of compound words: consider the word for fishhook, *čhakiyuħuġe*, which is a contraction of the words *čhaká*, *palate*, and *iyuħuġA*, *to break it by means of*.

This contraction also happens when one (or both) of the vowels involved are nasalized; in this case the sequences *anji*, *aiŋ*, and *anjiŋ* all contract to *iŋ*. For example, consider the compound words below

čháj + iŋkpá	čhíŋkpa	čháj + ičoġa	čhíŋčoġa
tree + tip	treetop	tree + to float up to	driftwood

However, like almost all sound-change rules, this is not steadfast nor foolproof. There are also many situations where the combination *ai* does not contract at all. If the *ai* originates from the prefix *a-* being attached to a word beginning in *i*, both vowels remain (if they did not, the *a* would simply disappear and it would be impossible to tell any conjugation had occurred at all!) For example

ié	aíe	idé	aíde
to speak	to gossip about it	to burn something	to burn on it

The same is true if the *a* is a component of one of the instrumental prefixes *ba*, *na*, *pa*, or *ka*. In all of these cases no contraction occurs, and the resultant words begin with the sequences *bai*, *nai*, *pai*, or *kai*, all with a glottal stop separating the two vowels.

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bahún	baíč'ihun	idé	paíde
to gash something with a knife	to cut oneself with a knife	to burn something	to light it by striking with something

There are yet other times when the sequence *ai* neither contracts to *í* nor remains unchanged, but instead coalesces to form the vowel *é*. This often occurs when the prefix *a* has the meaning of *to carry something with*, when attached to the motion verb *i*, *to arrive there*. This sort of construction, of *a+motion verb*, is very common in Dakota, and so this is an important case of contraction to familiarize yourself with. First, a few examples without contraction, to get a feel for this usage of the verbs of motion.

hí	ahí	hiyáye	ahíyaye
to arrive here	to arrive here carrying smth.	to pass by on the way	to pass by carrying something with

If the motion verb in question begins with an *i*, contraction occurs.

iyáye	éyaye	ihún̄ni	éhun̄ni
to depart from here	to depart from here carrying it	to arrive there	to arrive there bringing it

In addition to the sequence *ai*, the combination *aki* often contracts to *é* as well, especially when the *ki* is from the Dative conjugation. For example, the verb *kičhó*, meaning to invite someone to something, contains the combination *aki* when conjugated using either *wa* or *ya*. But, instead of the expected forms *wakičho*, contraction occurs.

kičhó	wéčho	yéčho	uŋkíčhopi
He invited her.	I invited him.	You invited her.	We invited him.

## EXAMPLE: THE CONTRACTION WÓ

The sequence *wa+o* often contracts to *wó*, and while there is not much to say about this particular contraction it is common enough and important enough to warrant its own section.

One very common occurrence of *wó* is on nouns created from stative verbs: this prefix functions much like the English suffix *-ness*, although is used much more widely.

wášte	wówašte	čhaŋzé	wóčhaŋze
It is good.	goodness	He is angry.	anger
eyé	wóeye	ohnáke	wóhnake
He said it.	a sentence	He put it in there.	a box / container

When a verb that begins with an *o* takes the prefix *wa-*, this combination similarly contracts to *wó*:

oyákA	wóyakA	očhíŋ	wóčhíŋ
to tell about it	to tell a story	to ask for something	to beg
odé	wóde	ophéthuj	wóphethuj
to look for it	to search	to buy it	to shop

Verbs which are formed using the instrumental prefix *yu-* can take in addition the prefix *wa-* as above, which takes the place of the receiver of the action. This may sometimes lead to contraction, and sometimes not; even when discussing the same verb! (However in those cases, the contracted verb will take on a different meaning than its non-contracted relative).

yuǵá	yušná	yuhá	yužáža
to husk something	to drop something	to have something	to wash it
wayúǵa	wayúšna	wayúha	wayúžaža
to husk things	to drop stuff	to carry things	to wash things
wóǵa	wóšna	wóha	wóžaža
to husk corn	to sacrifice	to have things	to do laundry

Even in cases where contraction does occur, oftentimes it does not appear in the conjugated forms, which break up the *wa+yu* cluster, and thus the verb reverts to its more usual form.

wóžaža	wabdúžaža	wadúžaža	waúnyužažapi
He did laundry.	I did laundry.	You did laundry.	We did laundry.
wókpaŋ	wabdúkpaŋ	wadúkpaŋ	waúnyukpaŋpi
He ground things.	I ground things.	You ground things.	We ground things.
wókse	wabdúkse	wadúkse	waúnyuksapi
He cut things.	I cut things.	You cut things.	We cut things.

As a quick side-note while discussing *wó-*, the possessive prefix *tha-* contracts with *wó-* to form *thó-*;

wówašte	thówašte	wóksape	thóksape
goodness	his goodness	wisdom	her wisdom

However, even here there are exceptions; the possessive form of *wóyuha*, belongings, does not contract and is instead *thawóyuha*.

This contraction of *wao* to *wó* brings us to a more general question, what are some of the other contractions that *ao* can undergo?

### EXAMPLE: THE SEQUENCE AO

Oftentimes when one portion of a compound word ends in *a* and the next word begins in *o*, the final *a* is dropped and the last consonant (cluster) moved onto the second word, without any intervening glottal stop.

wakpá + opháya	wakpóphaya	makhá + oǎdóka	makhóǎdoka
river + along	alongside a river	earth + hole	cave

When *a* is added as a prefix before a word beginning in *o* however, no contraction occurs (if it did, there'd be no way to tell that the prefix *a* was ever there!)

a + o + káǵA	a + ohómni	a + oháŋzi	a + ophéthuŋ
aókaǵA	aóhomni	aóhaŋzi	aóphethuŋ
to exaggerate	to encircle	to shade	to buy from sb.

If instead of two plain vowels, the sequence *ajo* appears, it often contracts to *uŋ*. As there are many compounds starting with the word *čhaŋ*, tree or wood, here are some woodsy examples.

čháŋ + ok'írŋ	čhuŋk'írŋ	čhaŋ + ošókA	čhuŋšóke
wood + to carry	a load of firewood	trees + to be thick	forest

### EXAMPLE: TERMINAL E

As one final example, we will look what happens when forming compound words where the first word ends in *e*. In this case, the *e* is usually dropped when the following word begins with a vowel. Unlike most cases of terminal vowel loss, no glottal stop is inserted and the final consonant of the first word does not change forms, but is instead tacked onto the following syllable. This kind of process happens in English in sentences such as *I helped her*, which is phonetically *ay help t er*, but is instead pronounced *ay help ter*.

čhaŋté + oyúze	čhaŋtóyuze	čhaŋté + ohnáka	čhaŋtóhna
heart + condition of	disposition	heart + to place inside	to cherish
h̄e + o + púza	h̄ópuza	napé + ožáža	napóžaža
mountain+ place + dry	desert	hand + washing place	sink

## GLIDE INSERTION

In certain cases, instead of inserting a glottal stop, contraction, or coalescence, a glide (either *w* or *ɣ*) is inserted between two neighboring vowels. In words formed so that an *i* is followed by one of the vowels *a*, *o*, or *u*, the glide *ɣ* often appears between them, attached to the beginning of the second syllable.

This is more frequent in western dialects such as Lakota. For instance, the verb *to speak* in Dakota is *íá*, but *íyá* in Lakota.

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<b>i+ókapte</b> instrument + to ladle	<b>iyókapte</b> cup	<b>mni+ayé</b> water + to go carrying	<b>mniyáye</b> water carrier
<b>thi + ošpáye</b> house + part	<b>thiyóšpaye</b> extended family	<b>thí + okšánj</b> house + around	<b>thiyókšanj</b> around the house

If the following vowel is instead nasal, either *anj*, *inj*, or *unj*, then no glide is inserted.

<b>i + unj</b> <b>iúnj</b> to rub something on	<b>i + anjpetu</b> <b>íanjpetu</b> the following day	<b>i + unjšida</b> <b>iúnjšida</b> to take pity by means of
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