

**ON THE INTERACTION OF GRAMMAR COMPONENTS IN LAKHÓTA:
EVIDENCE FROM SPLIT INTRANSITIVITY**
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0. Introduction. Lakhóta is the most widely spoken variety of Sioux, a dialect continuum which extends over much of the plains of the northern United States and central Canada¹. This language is often cited as a prototypical example of an "active" language: the subject person marker affixed to intransitive verbs varies depending on whether the verb is "active" or "stative". In transitives, the subject is cross-referenced by the active set while the direct object is cross-referenced by the stative set; cf. (1).

1. Person marking in Lakhóta:

	<u>active</u>	<u>stative</u>
'I'	wa-	ma-
'you'	ya-	ni-

Examples:

<u>active</u>	<u>stative</u>	<u>transitive</u>
wa-psiča	ma-xwá	ma-yá-kte 'you kill me'
I jumped'	'I am sleepy'	I (stative) you (active)-kill

In addition, there is a third person plural object morpheme *wičha*, which for our purposes can be said to occur only with transitive verbs, and a general plural enclitic *pi*, which (again for our purposes) can be said to occur with either animate third person subjects or second persons (subjects or objects). These morphological distribution statements are simplified to cover only the data used in this paper; cf. Rood and Taylor (to appear) for more details.

The split intransitivity pattern pervades the grammar of Lakhóta, affecting the phonology, the morphology, and the syntax, thus bearing on the issue of the interactions of these three components. Our purpose in this paper is to demonstrate that (1) some phonological rules are sensitive to the split intransitive distinction; (2) the determination of person marking class is not based on the semantics of the verb root or stem, but rather is sensitive to syntax, namely, whether or not the verb has an *initial* or deep subject or object. We will show that independently of split intransitivity, rules of person marking referring to grammatical relations are needed to account for reflexives, reciprocals, and verbs which take two stative arguments. The same rules, then, account for the differences among intransitive verbs. Finally, we will present evidence that the interpretation of a complement clause can depend on the syntactic distinction between embedded unaccusatives and unergatives.²

1. Phonological correlations with split intransitivity.

1.1. Correlation with velar palatalization. Lakhóta has a very ordinary velar palatalization rule of the form stated in (2) (Cf. Patterson 1990:150-156; Shaw 1980:192ff; Carter 1974:180; Boas and Deloria 1941:14; Boas and Deloria 1932:110; Riggs 1893:8):

2. k > č /i,e + ___ V

The exact statement of the preceding context for the process is complex; affixes from different lexical levels have different effects (cf. Patterson 1990:150-156 for the most recent discussion of these problems in a Lexical Phonology framework). The rule may apply after certain affixes, or after initial elements of compounds, i.e. the context can be either inflectional or derivational. Moreover, palatalization applies equally to plain, aspirated, and glottalized stops:

3. a. kʔú 'to give'
ničʔú 'she gave it to you'
- b. khuté 'to shoot at'
ničhúte kte 'he will shoot
at you'
- c. glí 'to arrive home coming'
kú 'to be on the way home, coming'
gličú 'to start out for home, coming'
cf. yagliyaku 'you have started coming home'
(The medial -y- is epenthetic and the second -a- is a separate morpheme which occurs whenever the verb carries an inflectional prefix.)

However, as previous researchers have noted, this rule is suspended in several morphologically defined contexts. Significantly for our purposes, unaccusative verbs, such as the three in (4), regularly fail to palatalize:

4. a. kháta 'be warm'
nikháta⁴ 'you are warm'
- b. khúžA³ 'be nauseous'
nikhúže 'you are nauseous'
- c. okháyake 'to have stuff (burrs, leaves) stuck on'
oníkhayake 'you have stuff stuck on you'

Derived verbs behave rather unpredictably with respect to this rule. In particular, when the prefixes *ka-* 'by a blow or by outside force' or *ki-* 'become' derive new verbs, neither the class of the new stem nor the class of the unprefixated stem is a reliable indicator of whether or not the prefixal /k/ will palatalize. We have many forms, including minimal pairs like those in (5a), for which the class of the derived stem is determining:

5. a. katʔátʔa 'fall down by accident' (unaccusative)
OR
'knock unconscious' (transitive) (from ka- +
tʔA 'die', itself unaccusative)
nikátʔatʔa 'you fell down by accident'
ničátʔatʔa 'she knocked you out'
- b. kakíze 'to suffer' (unaccusative) (there is no underived stem
*kíze)
nikákize 'you are suffering'
- c. akísni 'to recover from illness' (unaccusative) (from sní,
unaccusative, 'be cool')
aníkisni 'you are recovering'

- d. kasóta 'to break, i.e. to use up the money of' (transitive)
(from sóta, unaccusative, 'to be used up')
ničásota he? 'Did she use up your money?'

It is also common, however, for an unaccusative stem to remain immune to palatalization even when it is derived to be transitive. Boas and Deloria (1941:14) give 4 examples, one of which (also cited by Shaw (1980:193)) is (6):

6. kǰza 'to squeak' (unaccusative)
naníkǰza 'he makes you squeak by stepping on you' (na- instrumental prefix 'by action with the foot')

The exceptions to palatalization are always in the direction of unexpected immunity to the rule; we have been unable to find examples of unaccusative stems that do palatalize. The appropriate generalization, then, is that the designation [unaccusative] will always predict the phonological rule constraint [-velar palatalization], although there are other phenomena which also invoke this constraint.

1.2. Correlations with stress under reduplication. Several researchers (Patterson 1990, Sietsma 1988, Marantz 1982, Carter 1974, Wilbur 1973, Boas and Deloria 1941, et al.) have studied reduplication in Lakhóta. The most recent analysis (Patterson 1990: 89-99) concludes that reduplication is a suffix, best thought of as a copy of the last maximum syllable (CCVC) of the stem. The final vowel of the citation forms of many stems is considered epenthetic, and there are several subsequent rules which modify the consonant clusters which the suffix produces. For our purposes, however, the most salient observation is that of Boas and Deloria (1941:36-38), repeated by Carter (1974:234-236), that unprefixated transitive and unaccusative verbs take stress on the second syllable, while unergative verbs stress the first syllable. Boas and Deloria (1941:38) give about 20 examples of reduplicated unaccusatives stressed on the second syllable, and derived unergative or adverbial forms with first syllable stress; two of these are in (7):

7. a. blebléčaha 'to be shattered to pieces' (-ha 'progressive')
blébleča 'to shake the body, as a dog does after swimming'
b. snisníza 'to be flat, as a tire'
snísnis (adv.) 'gradually deflating'

Other examples of both patterns are given in (8):

- | | | |
|----|------------------------|-------------------------|
| 8. | <u>Unccusatives</u> | <u>Unergatives</u> |
| | púza 'dry' > puspúza | ǰópa 'snore' > ǰóbǰopa |
| | sápA 'black' > sabsápa | psíča 'jump' > psípsíča |
| | thó 'blue' > thothó | škáte 'play' > škáškate |

Transitives

- yúze 'to fish out' > yusyúze
khoté 'to shoot at' > khulkhúte

It should be noted that second syllable stress is the norm for the underlying forms in this language, although surface forms may have either first or second syllable stress. The addition of a prefix necessarily pulls the stress forward to conform with this constraint.⁵ Consequently, it is difficult to test what happens to these stress patterns when an unergative becomes transitive. The only derivational suffix we can find is the causative auxiliary *-ya*, which can sometimes be added to a reduplicated form; when this happens, stress appears to be consistently on the second syllable of the resulting forms:

9. a. *sabsápa* 'black' (reduplicated unaccusative)
 sabsábya 'blacken'
 b. *nášnaži* 'stand' (reduplicated unergative)
 našnážiya 'cause to stand'

Thus it is the lexical class of the derived stem to which the phonological rule of stress placement in reduplicated forms must refer. In this case, however, the unergatives are the exceptional pattern: the designation [unergative] triggers the phonological exception [first syllable stress]. All other forms will be stressed correctly by the rule which works for everything else in the language. Utilizing constraints on phonological rules as evidence, then, we find we must isolate two sets of intransitive verbs. The unaccusative set provides the exceptions to the velar palatalization rule, while the unergative set provides the exceptions to the stress rule when the verb reduplicates.

2. Semantic correlations. The difficulty of characterizing the unaccusative and unergative classes purely in semantic terms has been commented upon by everyone attempting to do so. Yet Merlan (1985) concludes that the unergative (or active) class requires animate subjects which are sometimes but not always agentive (= volitional). She emphasizes, however, that the unaccusative (or stative) class--which comprises the largest number of verb stems in Lakhóta--cannot be characterized semantically. Mithun (1991) proposes that the unergative class be defined by the cover term "agency"--which is actually a disjunction of properties, including participants that perform, effect, instigate, or control the action (in other words, her notion of agency is not equal to volitionality).

Examination of data like those in (10) leads us to different conclusions.

10. Examples of intransitive verbs, morphologically defined:

<u>Unergative/Active</u>		<u>Unaccusative/Stative</u>	
<i>máni</i>	'walk'	<i>khúžA</i>	'be sick'
<i>lowá</i>	'sing'	<i>watúkha</i>	'be tired'
<i>?í</i>	'arrive'	<i>yazá</i>	'be in pain'
<i>yÁ</i>	'go'	<i>šícA</i>	'be bad'
<i>hápáyA</i>	'lie down'	<i>akísni</i>	'get well'
<i>ináži</i>	'stand up'	<i>púzA</i>	'be dry'
<i>pšá</i>	'sneeze'	<i>híwá</i>	'be sleepy'
<i>glépa</i>	'vomit'	<i>t?A</i>	'die, be dead; faint'

hoŋpÁ	'cough'	wašté	'be good'
čhéyA	'cry'	ŋíopeča	'be good looking'
athát?elyA	'be fed up'	čhazéka	'be angry'
nawízi	'be jealous'	iyókiphi	'be happy'
ní	'be alive'	kiní	'become alive, revive'
niyÁ	'breathe'	naphópho	'blow up in anger'
?ú	'be, exist'	kačékcékA	'stagger'
thí	'dwell'	hŋhápáyA	'fall (on purpose)'
ihábla	'dream'	tywÁ	'open eyes'
iyákA	'run to/in'	iňá	'smile'
iňát?A	'laugh'		

Note, first, that it is incorrect to claim that all unergative verbs require animate participants; some clearly do not, contra Merlan (1985):

11. mní wá ŋípáye 'a lake lies; there is a lake'
mahél iyá eyá ú 'there are rocks inside'
wówapi ki kiyé 'the paper/flag flies'
žoža ki náži 'the jar is standing'

Second, the meanings of some unaccusative verbs meet the definition of Mithun's agency notion, which she claims characterizes unergative verbs: 'blow up in anger', 'stagger', 'fall (on purpose or not)', 'open eyes', 'smile', 'make oneself be good-looking' (ma-kí-wašte)

Third, many other unaccusative verbs can occur in contexts where it is clear that the state or action is volitional; this never affects the morphological marking. For example, 'be good' and 'be bad' are morphologically stative, regardless of whether they characterize a natural disposition or a temporary one induced by a desire to obtain something or get some attention on the part of the subject.

Moreover, we note the following puzzling comparisons: (1) Unergative 'be alive'^o is opposed to unaccusative 'be dead'. Here too, the difference can hardly be one of agency, in Mithun's sense. (2) 'Be fed up' and 'be jealous' are unergative but 'be angry', is unaccusative. (3) 'Vomit, sneeze, hiccough, yawn' are unergative, but 'faint' is unaccusative. (4) Finally, 'be alive' is unergative while 'become alive' in the sense of reviving after an illness, an operation, or fainting is unaccusative. This is the reverse of what would be expected semantically. But not all instances of change of state are unaccusative: 'lie down, stand up, sit down, arrive' are unergative.

So it seems clear to us that there is no consistent semantic criterion which characterizes the meanings of the stems of either class of intransitives.

Alternatively, one might want to look at an aspectually based classification, such as that of Van Valin (1990). Such a classification relies on syntactic/semantic tests originally proposed in Dowty 1979, as illustrated in the following table (from Van Valin 1991) (D = durative reading; P = punctual reading):

Criterion	States	Achievements	Accomplishments	Activities
1. Occurs with progressive	No	D:yes/P:No	Yes	Yes
2. Occurs with adverbs like vigorously, carefully, etc.	No	No	Yes	Yes
3. Occurs with ϕ for an hour, spend an hour ϕ ing	Yes	D:Yes/P:No	Yes	Yes
4. Occurs with ϕ in an hour, take an hour to ϕ	No	D:yes/P:No	Yes	No

Some problems immediately arise: First, progressive is not a good test to determine stativity in Lakhóta. Most unaccusative verbs can take the equivalent of the progressive, referring to something going on now. This is true in particular of 'be sick,' 'be cold,' 'be in pain,' 'be happy,' 'be bad/good,' 'be angry,' 'be crazy'.

Second, explicit mention of volitionality ("on purpose") is often accomplished by means of instrumental (or causative) and reflexive morphemes, with as a consequence, stative marking; cf. (12):

12. *iglúhoŋpe* 'he coughed on purpose' = 'He made himself cough'
(REFL-yu 'cause'-hoŋpA 'cough')

Third, while Lakhóta does not have temporal expressions based on our 24 hour system, it has a large number of temporal expressions that are ambiguous between durational and punctual readings, making the telicity test difficult to apply.

It would appear, though, that we did find equivalents for 'for 10 minutes', *10 minutes iwáhahelya* and 'in 10 minutes', *10 minutes wahéhahelya*. Using these phrases, Ms. Catches expressed a whole range of acceptability judgments, regardless of whether individual verbs are unergative or unaccusative. See (13):

13. a. 10 minutes *iwáhahelya iglúhoŋpe* 'She made herself cough for ten minutes'
10 minutes *wahéhahelya iglúhoŋpe* 'She made herself cough in ten minutes' (unaccusative)
- b. 10 minutes *iwáhahelya kačékčkeke* 'He staggered for 10 minutes'
*10 minutes *wahéhahelya kačékčkeke* '*He staggered in ten minutes' (unaccusative)
- c. 10 minutes *iwáhahelya yazá* 'He was in pain for 10 minutes'
?10 minutes *wahéhahelya yazá* 'She was in pain in ten minutes' (unaccusative)
- d. 10 minutes *iwáhahelya iháble* 'She dreamed for 10 minutes'
?10 minutes *wahéhahelya iháble* 'She dreamed in 10 minutes' (unergative)
- e. 10 minutes *iwáhahelya nawízi* 'He was jealous for 10 minutes'
10 minutes *wahéhahelya nawízi* 'He was jealous in 10 minutes' (unergative)

Clauses which contain two coreferential arguments contain a reflexive marker *ičʔi* prefixed to the stem verb. As noted most recently by Williamson (1979), this causes a change in person marking: the subject 'you' must be marked with the stative morpheme and not with the active one.

Now observe that Lakhóta has a class of verbs--including 'try', 'be reluctant', 'pretend', etc.--which occur without a complementizer to mark the embedded clause. Williamson (1979:356-357) analyzes these as Equi verbs and claims that the Equi target must be a final subject in the embedded clause:

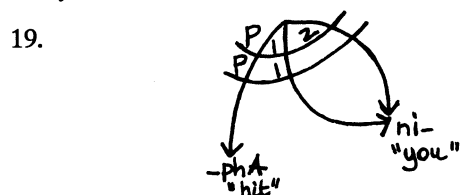
17. a. walówa 'I sing' lowá wa-čháme 'I try to sing'
 wa-lowá sing 1ACT-try
 1ACT-sing
- b. mištíme 'I sleep' ištíme wa-čháme 'I try to sleep'
 ma-ištíme sleep 1ACT-try
 1STAT-sleep
- c. Bill awáphe 'I hit Bill'
 Bill a-wa-phA
 Bill LOC-1ACT-hit
 Bill aphe wakápj 'I was reluctant to hit Bill'
 Bill a-phA wa-kápj
 Bill LOC-hit 1ACT-be reluctant

Note in particular that unergative as well as unaccusative verbs can be embedded under Equi verbs. This follows naturally from the Unaccusative Hypothesis, according to which unaccusative verbs take a deep direct object which advances to subject.

Given the generalization about Equi targets, the fact that the stative marked argument in reflexive structures can undergo Equi indicates that it is the final subject in the embedded clause:

18. aʔičʔiphe yakápj 'you are reluctant to hit yourself'
 a-ičʔi-phA ya-kápj
 LOC-REFL-hit 2ACT-be reluctant

We follow Williamson (1979:359) in positing a multiattachment analysis for reflexive structures in Lakhóta.



We go further than Williamson (1979) by positing that the multiattachment is resolved by cancellation of the 2-relation, much like the

structure Legendre has posited elsewhere for the French reflexive *se* (Legendre 1986).⁸

Reflexivization in Lakhóta thus amounts to a detransitivization process. Structure (19) is the particular RG implementation of this idea, making explicit why the subject occurs with a stative rather than an active marker: it heads an initial 2-arc and a final 1-arc, just as do the participants in unaccusative structures. The generalization appears to be that a nominal heading a 2-arc (regardless of the level) determines stative marking on the verb.

An analysis that simply assumed that marking is lexical, without relating it to argument structure, would have to list reflexive verbs separately in the lexicon, and thus miss an important generalization.

Reciprocity is also marked by a prefix attached to the verb, *kičhi* ‘each other’. Unlike the reflexive marker, the reciprocal does not require a change in person marking. In other words, *kičhi* ‘each other’ behaves like the object pronoun *wičha* ‘them’.

20. a. awíčhayaphe ‘you hit them’
 a-wičha-ya-phA
 LOC-them-2ACT-hit
- b. ayéčhipha pi ‘you (pl) hit each other’
 a-ya-kičhi-phA pi
 LOC-2ACT-each other-hit PL
- c. aníč[?]ipha pi ‘you (pl) hit yourselves’
 a-ni-íč[?]i-phA pi
 LOC-2STAT-REFL-hit PL

We propose that the reciprocal construction does not involve the detransitivization process found in the reflexive construction. In other words, the structure is simply transitive, with the bound morpheme *kičhi* ‘each other’ playing the role of direct object.

This difference of analysis, motivated by the difference in person marking, makes the prediction that processes that affect surface direct object arguments in Lakhóta ought to treat reflexive *íč[?]i* and reciprocal *kičhi* differently.

When certain embedded verbs take reciprocal markers, there are two possible structures: *kičhi* can occur on the embedded verb or on the main verb (where the main verb follows the embedded one) (cf. Boas and Deloria 1941:103); note that the embedded verb bears no person marking for its understood subject.

21. a. *kičhi*yus yaqá pi yús *kičhi*yaqa ha pi
 each other-hold sit PL hold each other-sit PROG PL
 ‘they were sitting holding each other’
- b. ó*kičhi*ya⁹ kúza pi ókiye *kičhi*kúza pi
 LOC-e. o.-help pretend PL help e. o.-pretend PL
 ‘they pretend to help each other’

When the direct object of the embedded verb is the pronominal bound morpheme *wičha* for animate ‘them’, movement is also possible:

22. a. *ówičhakiye kúza pi*
 LOC-them-help pretend PL
ókiye wičhákuza pi
 help them-pretend PL
 'they_i pretend to help them_j'
- b. *wičháyus yačá pi*
 them-hold sit PL
yús wičháyačá pi
 hold them-sit PL
 'They are sitting
 holding them'

Interestingly enough, the reflexive marker *ičʔi* cannot move from the embedded verb to the main verb:

23. a. *óʔičʔiye kúza pi* **ókiye ičʔikuza pi*
 LOC-REFL-help pretend PL help REFL-pretend PL
 'they pretend to help themselves'
- b. *iglús¹⁰ yačá he* 'she is sitting holding herself'
 **yús ignáka he* (also **ičʔiyáka he*)

This shows that syntactically the reflexive marker is not the same kind of element as the reciprocal marker, despite the fact that morphologically both are bound morphemes. Under our analysis they should not be the same, since the reciprocal element is a surface argument of the verb while the reflexive marker is not (because of the detransitivization process). The generalization concerning this movement phenomenon appears to be that only a final 2 can move (optionally) to the main verb.

3.2. A special class of verbs: Boas and Deloria (1941:77) report the existence of a class they characterize as "neutral (= stative) with two objects". These are verbs which take two stative markers:

24. a. *iyé-ni-ma-čheča* 'I resemble you'
 LOC-2STAT-1STAT-resemble
- b. *i-ní-ma-ta* 'I am proud of you'
 LOC-2STAT-1STAT-proud of

Although there is no space to motivate this conclusion completely here, let us just suppose that these are examples of the structures called Antipassive in RG, posited in particular for Choctaw by Davies (1984)¹¹:

- 25.
-
- ta* *-ma* *-ni*
 "proud of" "I" "you"

Note that structure (25) accounts for the two instances of stative person marking if what determines stative marking is heading a 2-arc at some level, as we hypothesized earlier. Notice also that 'you' is a surface argument, though it is a chomeur, meaning it has lost its status as direct

3.3. Čha and the strength of presupposition. Main verbs like ‘know’ or ‘realize’, which presuppose the truth of their complement, take a complement clause which is introduced with complementizers of two kinds, either *ki* (in some dialects *kj*) with or without *hé* on the one hand, or *čha* on the other. When *čha* is used, the strength of the presupposition varies, depending on whether the embedded verb is unergative or unaccusative. When *hé* or *ki* is used, there is no such effect. While we do not understand exactly why this should be the case, we would like to report the facts (to our knowledge never noticed before) and suggest how they fit into our analysis.

29. a. Wamákhaška *kj* čhamáhel oʔúya pi *hé* slolwáye.
 animals the forest they live COMP I-know
 ‘I know that the animals live in the forest.’ (unergative)

Wamákhaška *kj* čhamáhel oʔúya pi *čha* slolwáye.
 animals the forest they live COMP I-know
 ‘I know for sure that the animals live in the forest’

b. řʔahíyu kaňápe *ki hé* wówičhakhe
 slowly he-drive COMP it-is-true
 ‘It is true that he was driving slowly.’ (unergative)

řʔahíyu kaňápa *čha* wówičhakhe
 slowly he-drive COMP it-is-true
 ‘It is absolutely true that he was driving slowly’

c. khúže *kj hé* wówičhakhe
 she-sick COMP it-is-true
 ‘It is true that she is sick (I’m sure of it)’ (unaccusative)

khúža *čha* wówičhakhe
 she-sick COMP it-is-true
 ‘It is true that she was sick, but I’m not willing to stick my neck out about it.’

Transitive verbs behave like unergatives.

30. šúka wą ókiya *ki hé* slolwáye
 dog a help COMP I-know
 ‘I know that he helped a dog’ (transitive)

šúka wą ókiya *čha hé* slolwáye
 dog a help COMP I-know
 ‘I know for sure that he helped a dog’

Structurally, transitive and unergative verbs have one thing in common: a deep subject; unaccusatives do not have such a subject. It would appear, then, that the strengthening of the presupposition occurs in parallel to the presence of a deep subject. But notice that this makes a prediction

concerning reflexives: under the multiattachment analysis, reflexive verbs take a deep subject like transitives, even though they are marked stative like unaccusatives. If the generalization has to do with the occurrence of a deep subject, then reflexives should allow strengthening of the presupposition. And they do, according to our consultant:

31. a. óʔičʔiya pi ki slowáye
 help-self PL COMP I-know
 'I know that they helped themselves'
- óʔičʔiya pi čha slowáye
 help-self PL COMP I-know
 'I know for a fact that they helped themselves'
- b. ksuyéʔičʔiya pi ki he héčhetu.
 hurt-self-cause PL COMP be the case
 'It is the case that they hurt themselves'
- ksuyéʔičʔiya pi čha héčhetu.
 hurt-self-cause PL COMP be the case
 'It is for sure the case that they hurt themselves'

4. Conclusion. We conclude by returning to the main issue raised by split intransitivity in Lakhóta: Does the active vs. stative marking register a syntactic distinction or is it simply a lexical feature of each Lakhóta intransitive stem (with perhaps an original semantic basis lost through various grammaticalization processes)? Examining syntactic phenomena like reflexive, reciprocal, and doubly stative structures has led us to the conclusion that, independently of split intransitivity, we need to posit morpho-syntactic rules of person marking that are sensitive to grammatical relations like direct object and subject. These rules naturally extend to intransitives of both types under the Unaccusative Hypothesis. In the absence of positing that unaccusatives and unergatives differ syntactically, one would need at least two distinct rules of stative marking, with the consequence that the morphological identity of the unaccusatives and the reflexives would be a complete accident. We thus reject lexical marking in favor of a syntactic distinction feeding lexical formation. Phonological processes in Lakhóta are sensitive to lexical formation and thus indirectly to the syntactic history of a given stem.

NOTES

¹In addition to the literature cited in the references and to Rood's previous 20 years of experience with this language, we have elicited data specifically for this paper from Ms. Violet Catches from the Cheyenne River reservation in South Dakota. We would like to express our profound gratitude to Ms. Catches for her cooperation and assistance. Support for this work has come in part from NSF grant no. BNS-8820025, and in part from the University of Colorado Institute for Cognitive Science, for which we are also grateful. Lakhóta examples are all cited in the University of Colorado orthography, which treats aspirated and glottalized consonants as clusters of consonant plus /h/ or /ʔ/, respectively, and which writes [x] as *ħ* and [ɣ] as *ǰ*.

- ²We use *active* and *unergative* interchangeably; likewise *stative* and *unaccusative*.
- ³Two comments on this form: (a) in Santee (Dakota) the meaning is 'lazy', and the word is therefore best avoided when possible. (b) the capital "A" (you may also see A) designates a vowel that ablaunts from /a/ or /ã/ to /e/ or to /ĩ/ depending on the following grammatical context.
- ⁴There are cultural restrictions on the use of this form for Ms. Catches and many other speakers, making it unidiomatic for them. Ms. Catches agrees, however, that if the word were to occur, this would be its proper shape. Other researchers, including Riggs (1893:8) have cited this form without comment.
- ⁵Thus 'you are all black' is *nisábsapapi*; compare *sabsápa* above.
- ⁶Historically, the older meaning seems to be 'breathe'.
- ⁷Many verbs begin with a vocalic prefix *a*, *o*, or *i*, which sometimes has a locative meaning and changes the valence of the verb, but often is simply a required part of the stem. We gloss these prefixes LOC; personal affixes follow them.
- ⁸See also Perlmutter (1989) for an analysis of Italian that unifies unaccusatives with reflexives, under the Unaccusative Hypothesis and a similar multiattachment analysis of reflexives.
- ⁹When inserted into a verb before the syllable *-ki*, the reciprocal *kičhi* and the reflexive *ičʔi* always cause the deletion of the *-ki-* of the verb. Thus 'help' is *ókiyA*, but its reciprocal is *ókičhiyA*. Cf. the reflexive in (23).
- ¹⁰When it precedes a /y/, *ičʔi* coalesces with the /y/ to give *ig!*. If the following vowel is nasal, the /l/ becomes /n/.
- ¹¹Williamson (1979) also discusses these verbs, proposing a different analysis.

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