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 Canada\(^1\). 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:

<table>
<thead>
<tr>
<th></th>
<th>active</th>
<th>stative</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘I’</td>
<td>wa-</td>
<td>ma-</td>
</tr>
<tr>
<td>‘you’</td>
<td>ya-</td>
<td>ni-</td>
</tr>
</tbody>
</table>

Examples:

<table>
<thead>
<tr>
<th>active</th>
<th>stative</th>
<th>transitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>wa-psiča</td>
<td>ma-xwá</td>
<td>ma-yá-kte ‘you kill me’</td>
</tr>
<tr>
<td>I jumped’</td>
<td>‘I am sleepy’</td>
<td>I (stative) you (active)-kill</td>
</tr>
</tbody>
</table>

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 intransitivitiy 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. \( k > ě/i,e + \text{V} \)

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. k?ú ‘to give’
    nič?ú ‘she gave it to you’

b. khúté ‘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’
    nikháta‘you are warm’

b. khúžA³ ‘be nauseous’
    nikhůže ‘you are nauseous’

c. okháyake ‘to have stuff (burrs, leaves) stuck on’
    onikhayake ‘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 kí- ‘become’ derive new verbs, neither the class of the new stem nor the class of the unprefix 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. kat?át?a ‘fall down by accident’ (unaccusative)
       OR
       ‘knock unconscious’ (transitive) (from ka- + t?A ‘die’, itself unaccusative)
    nikát?at?a ‘you fell down by accident’
    ničát?at?a ‘she knocked you out’

b. kakíze ‘to suffer’ (unaccusative) (there is no underived stem *Kíze)
    nikákíze ‘you are suffering’

c. akísi ‘to recover from illness’ (unaccusative) (from sní, unaccusative, ‘be cool’)
    aníkísi ‘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. kíza ‘to squeak’ (unaccusative)
náníkíza ‘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
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 unprefixed 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. blebléčahá ‘to be shattered to pieces’ (-há ‘progressive’)
   blebléča ‘to shake the body, as a dog does after swimming’
   b. snísnižá ‘to be flat, as a tire’
   snísni (adv.) ‘gradually deflating’

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

8. Unaccusatives
   púzA ‘dry’ > puspúza
   sápA ‘black’ > sabsápá
   thó ‘blue’ > thothó
   Unergatives
   gópa ‘snore’ > góbógopa
   psiča ‘jump’ > psipsíća
   škáte ‘play’ > škáškate

Transitives
   yúze ‘to fish out’ > yusýuze
   khuté ‘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. 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:

<table>
<thead>
<tr>
<th>Unergative/Active</th>
<th>Unaccusative/Stative</th>
</tr>
</thead>
<tbody>
<tr>
<td>máni</td>
<td>khúžA</td>
</tr>
<tr>
<td>lowá</td>
<td>watůkha</td>
</tr>
<tr>
<td>'i</td>
<td>yazá</td>
</tr>
<tr>
<td>yÁ</td>
<td>šičA</td>
</tr>
<tr>
<td>řipáyA</td>
<td>akísni</td>
</tr>
<tr>
<td>ináži</td>
<td>púžA</td>
</tr>
<tr>
<td>pšá</td>
<td>řwá</td>
</tr>
<tr>
<td>glépA</td>
<td>t?Á</td>
</tr>
<tr>
<td>'walk'</td>
<td>'be sick'</td>
</tr>
<tr>
<td>'sing'</td>
<td>'be tired'</td>
</tr>
<tr>
<td>'arrive'</td>
<td>'be in pain'</td>
</tr>
<tr>
<td>'go'</td>
<td>'be bad'</td>
</tr>
<tr>
<td>'lie down'</td>
<td>'get well'</td>
</tr>
<tr>
<td>'stand up'</td>
<td>'be dry'</td>
</tr>
<tr>
<td>'sneeze'</td>
<td>'be sleepy'</td>
</tr>
<tr>
<td>'vomit'</td>
<td>'die, be dead; faint'</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>holographic</th>
<th>wašté</th>
<th>‘be good’</th>
</tr>
</thead>
<tbody>
<tr>
<td>čhěyA</td>
<td>ñópeča</td>
<td>‘be good looking’</td>
</tr>
<tr>
<td>atháti?elyA</td>
<td>čhážéka</td>
<td>‘be angry’</td>
</tr>
<tr>
<td>nawízi</td>
<td>iyókiphi</td>
<td>‘be happy’</td>
</tr>
<tr>
<td>ní</td>
<td>kíní</td>
<td>‘become alive, revive’</td>
</tr>
<tr>
<td>níyÁ</td>
<td>naphóho</td>
<td>‘blow up in anger’</td>
</tr>
<tr>
<td>?ū</td>
<td>kačékečA</td>
<td>‘stagger’</td>
</tr>
<tr>
<td>têi</td>
<td>hjfpáyA</td>
<td>‘fall (on purpose)’</td>
</tr>
<tr>
<td>iháblA</td>
<td>tūwA</td>
<td>‘open eyes’</td>
</tr>
<tr>
<td>iyákA</td>
<td>iñá</td>
<td>‘smile’</td>
</tr>
<tr>
<td>iñá?A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

11. mní wâ ñpáye ‘a lake lies; there is a lake’
  mahél iyâ eyá ū ‘there are rocks inside’
  wówapi ki kiyé ‘the paper/flag flies’
  žožá 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-ki-wašté).

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’ 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, hiccup, 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):
<table>
<thead>
<tr>
<th>Criterion</th>
<th>States</th>
<th>Achievements</th>
<th>Accomplishments</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Occurs with progressive</td>
<td>No</td>
<td>D:Yes/P:No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Occurs with adverbs like</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vigorously, carefully, etc.</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Occurs with phi for an hour,</td>
<td>Yes</td>
<td>D:Yes/P:No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>spend an hour phiing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Occurs with phi in an hour,</td>
<td>No</td>
<td>D:Yes/P:No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>take an hour to phi</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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. iglúhóphi ‘he coughed on purpose’ = ‘He made himself cough’ (REFL-yu ‘cause’-hotáphi ‘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 wáháhelya and ‘in 10 minutes’, 10 minutes wahéhglya. 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 iwáháhelya iglúphi ‘She made herself cough for ten minutes’

b. 10 minutes iwáháhelya kačékceke ‘He staggered for 10 minutes’

*10 minutes wahéhglya kačékceke ‘*He staggered in ten minutes’ (unaccusative)

c. 10 minutes iwáháhelya yazá ‘He was in pain for 10 minutes’

?10 minutes wahéhglya yazá ‘She was in pain in ten minutes’ (unaccusative)

d. 10 minutes iwáháhelya iháble ‘She dreamed for 10 minutes’

?10 minutes wahéhglya iháble ‘She dreamed in 10 minutes’ (unergative)

e. 10 minutes iwáháhelya navízi ‘He was jealous for 10 minutes’

10 minutes wahéhglya navízi ‘He was jealous in 10 minutes’ (unergative)
f. *10 minutes iwáhahelya hi *“He was arriving for 10 minutes
(OK as ‘In about 10 minutes he arrived’)
10 minutes wahéhalya hi ‘It took him 10 minutes to get here’
(unergative)

Moreover, many verbs appear in telic or atelic contexts, regardless of
their morphological person marking class. A stative marked verb like
‘be in pain’ is atelic, but so is an active marked verb like ‘dream’. That
telicity is irrelevant can be further shown by the lack of morphological
distinction between activities like ‘walk in the forest’ and accomplishments
like ‘walk to the forest’ (See Dowty, 1979 and Van Valin, 1990 for further
discussion of this distinction). In Lakhóta, both types of events are marked
the same, i.e. active; see (14):

14. a. 10 minutes iwáhahelya chámmáhel omawani he (preferred with
progressive marking) ‘I walked in the forest for 10
minutes’

b. 10 minutes wahéhalya chúšake ektá omáwani ‘I walked to the
forest in 10 minutes’

We thus conclude that semantics is inadequate to predict Lakhóta
morphological classes: we have tested for root meaning, characterized both
as volitional and as employing agency, and we have tested for aspect and
for telicity, and found no correlations.

3. Syntactic correlations. In this section, we present evidence for the
syntactic distinction dubbed the Unaccusative Hypothesis in Perlmutter
(1978) and made explicit in diagram 15. Unaccusatives select a deep
object argument (= a 2) while unergatives select a deep subject (= a 1):

15.  

<table>
<thead>
<tr>
<th>Unergative</th>
<th>Unaccusative</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image_url" alt="Diagram" /></td>
<td><img src="image_url" alt="Diagram" /></td>
</tr>
</tbody>
</table>

-psi'ya “jump”  
-wa- “I”

-xyá “sleepy”  
-ma- “I”

We will argue, based on reflexive and reciprocal structures, that
person marking rules must refer to deep grammatical relations; then we
will show how these deep relations naturally account for the two classes of
intransitives.

3.1. Reflexives vs. reciprocals. Observe the contrasts in (16):

16. a. ańči?iphe ‘You hit yourself’
a-ni-ič?i-phA
LOC-2STAT-REFL-hit

b. *a-ya-ič?i-phA
LOC-2ACT-REFL-hit
Clauses which contain two coreferential arguments contain a reflexive marker ič’ti 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. walówą ‘I sing’
   wa-lową
   1ACT-sing

   lowá wa-čháme ‘I try to sing’
   sing 1ACT-try

b. mištime ‘I sleep’
   ma-ištimo
   1STAT-sleep

   ištíme wa-čháme ‘I try to sleep’
   sleep 1ACT-try

c. Bill awáphe ‘I hit Bill’
   Bill a-wáphe
   Bill LOC-1ACT-hit
   Bill aphé wakápí ‘I was reluctant to hit Bill’
   Bill a-phá wa-kápí
   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. a?ič’ti-phe yakápí ‘you are reluctant to hit yourself’
   a-ič’ti-phá ya-kápí
   LOC-REFL-hit 2ACT-be reluctant

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

19. 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).  

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. awičhayaphe ‘you hit them’
   a-wičha-ya-phA
   LOC-them-2ACT-hit

   b. ayičhipha pi ‘you (pl) hit each other’
   a-ya-kičhi-pha pi
   LOC-2ACT-each other-hit PL

   c. aničhipha pi ‘you (pl) hit yourselves’
   a-ni-ičchi-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 *ič?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. *kičhiyus* yạká pi yús *kičhiyaka* hạ pi
   each other-hold sit PL hold each other-sit PROG PL
   ‘they were sitting holding each other’

   b. *ókičhyia*9 kúza pi *ókiye kičhi*kyaza 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. ówichakiye kýza pi
   LOC-them-help pretend PL
   ókiye wícháºkuza pi
   help them-pretend PL
   ‘they pretend to help them’

   b. wícháºyus yáká pi
      them-hold sit PL
      yús wícháºyaka pi
      hold them-sit PL
      ‘They are sitting holding them’

   Interestingly enough, the reflexive marker ič?i cannot move from the
   embedded verb to the main verb:

23. a. óič?iye kýza pi
    LOC-REFL-help pretend PL
    ‘they pretend to help themselves’

   b. iglús10 yáká he ‘she is sitting holding herself’
      *yús ignáka he (also *ič?iyáka 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-ní-mačeča ‘I resemble you’
    LOC-2STAT-1STAT-resemble

   b. i-ní-ma-tá ‘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.

   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
object, but not its status as an argument. That argument can appear on the lower verb of an embedded structure, as (26a) shows, but it cannot move to the main verb (26b).

26. a. iyé-ni-ma-cheča wa-kúze ‘I pretend to resemble you’
   LOC-2STAT-1STAT-resemble 1ACT-pretend
   b. *iyé-cheča čhi-cúze (čhi is a portmanteau for expected wa-ni or ni-wa) ‘I pretend to resemble you’
   LOC-resemble -1/you-pretend

Under the Antipassive analysis, that object is a final chomeur, not a final 2; this confirms our earlier hypothesis that only a final 2 can move to the main verb.

Additional evidence for the Antipassive analysis of (25) comes from the fact that neither wičha nor ič?i can move to the main verb, the former because it is a final chomeur, the latter because it is not a final argument of the embedded verb.

27. a. awičhata kúza pi
    *atá wičhákúza pi
    ‘They pretend to be proud of themselves’
   b. ič?ičiťa kúza pi
    *itá ič?ikúzapí
    ‘They pretend to be proud of them’

To summarize the discussion of reflexive and reciprocals in Lakhóta, we have shown that reflexive structures involve a syntactic process of detransitivization, which explains why they uniquely end up with stative marking. Moreover, we have argued that a nominal heading a 2-arc at any level determines stative marking on the verb. Our analysis thus unifies reflexive, reciprocal, and doubly stative structures with unaccusative structures by making explicit what they have in common, a 2 at some level, responsible for a common morphological property, i.e. stative marking.

To account for the fact that stative marking takes precedence over active marking in Lakhóta, we propose (28), a strict dominance constraint hierarchy of the type proposed by Prince and Smolensky (in preparation) for phonology:

28. M: each surface argument contributes exactly one marker
   A: a surface argument A’s marker is ACTIVE if A bears the 1-relation at some level
   S: a surface argument A’s marker is STATIVE if A bears the 2-relation at some level
   Strict dominance constraint hierarchy: M >> S >> A

Notice that constraint M -- which is absolute -- is "responsible" for the disjunctive ordering of S and A. Disjunctive orderings of morphosyntactic rules have been documented in several languages, including Choctaw (Davies, 1984).

In Lakhóta, this preference for marking the presence of direct object correlates well with Merlan’s 1985 observation of an imbalance among intransitives -- the active marked class is small in number, while the stative marked class is large.
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 kļ) 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. Wamákhašką kj čhámahel o?yą pi hé slolwáye. animals the forest they live COMP I-know ‘I know that the animals live in the forest.’ (unergative)

Wamákhašką kj čhámahel o?yą pi čha slolwáye. animals the forest they live COMP I-know ‘I know for sure that the animals live in the forest’

b. fiʔahiyu kañápe ki hé wówichiakhe slowly he-drive COMP it-is-true ‘It is true that he was driving slowly.’ (unergative)

fiʔahiyu kañápa čha wówichiakhe 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. šůka wą ókiya ki hé slolwáye dog a help COMP I-know ‘I know that he helped a dog’ (transitive)

šůka 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. óʔiʔiʔiya pi ki slolwāye
help-self PL COMP I-know
'I know that they helped themselves'

b. ksuyéʔiʔiya pi čha slolwāye
hurt-self-cause PL COMP I-know
'I know for a fact that they helped themselves'

ksuyéʔiʔiya pi čha hēchetu.
hurt-self-cause PL COMP be the case
'It is the case that they hurt themselves'

ksuyéʔiʔiya pi čha hēchetu.
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 Lakhota: Does the active vs. stative marking register a syntactic distinction or is it simply a lexical feature of each Lakhota 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 Lakhota 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. Lakhota 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 ḥ and [ɣ] as ġ.
2 We use active and unergative interchangeably; likewise stative and unaccusative.

3 Two 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 Α) designates a vowel that ablauts from /a/ or /a/ to /e/ or to /i/ depending on the following grammatical context.

4 There 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.

5 Thus ‘you are all black’ is nisábsapapi; compare sabsápa above.

6 Historically, the older meaning seems to be ‘breathe’.

7 Many 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.

8 See also Perlmutter (1989) for an analysis of Italian that unifies unaccusatives with reflexives, under the Unaccusative Hypothesis and a similar multiattachment analysis of reflexives.

9 When inserted into a verb before the syllable -ki, the reciprocal kíchi and the reflexive ič?i always cause the deletion of the -ki- of the verb. Thus ‘help’ is ókiyA, but its reciprocal is ókičihiyA. Cf. the reflexive in (23).

10 When it precedes a /y/, ič?i coalesces with the /y/ to give igl. If the following vowel is nasal, the /l/ becomes /n/.

11 Williamson (1979) also discusses these verbs, proposing a different analysis.

REFERENCES


