The agreement pattern of Lakota is classified typologically as active-stative because subjects of active verbs are cross-referenced with the ‘active’ series, while subjects of stative verbs are cross-referenced with the ‘stative series, which also cross-references all objects (Boas and Deloria 1941, Williamson 1979, 1984, Shaw 1980, Dahlstrom 1983, Van Valin 1985, Mithun 1991, Legendre and Rood 1992, Rood and Taylor 1996). We see this pattern in the examples below from Rood and Legendre 1992:380. where the subject of the stative verb ‘be sleepy’ is cross-referenced like the object of the verb ‘kill’, and unlike the subject of the active verb ‘jump’.

(1) Wa-pściča.
    1stACTIVE- jump
    ‘I jumped.’

(2) Ma-xwa.
    1stSTATIVE be.sleepy’
    ‘I am sleepy.’

(3) Ma-ya-kte.
    1stSTATIVE- 2ndACTIVE kill
    ‘You kill me.’

This pattern seems quite unlike the Case-based agreement pattern found in many other languages. For example, in Italian, true agreement cross-references nominatives, and accusatives and datives are cross-referenced with syntactic clitics (with some restrictions on clitic doubling).

(4) Maria me lo spedisce.
    Maria  CL.DAT CL.ACC sends-AGR
    ‘Maria sends it to me.’

Much literature on the active-stative agreement pattern in Lakota and other languages starts (and ends) with the question of what these two series mark. Proposals tend to take one of two opposing approaches. One is to argue that such languages actually do fit the Case-based model of agreement because subjects of stative verbs have accusative Case (e.g. Williamson 1984 for Lakota). The other approach is to argue that the Case-based model is not relevant for these languages because these two series mark something else, such as initial grammatical relations or protoroles (e.g. Williamson 1979, Dahlstrom 1983, Van Valin 1985, and Legendre and Rood 1992 for Lakota).¹

¹ Initial grammatical relations or protoroles correspond to the notion of semantic case in Fillmore 1968. To avoid confusion, I follow the current practice of confining the term case to syntactic/morphological case. Also following current practice, I use Case for syntactic case (also called abstract case) and case for the morphology that realizes Case.
This paper starts with a different question: What are these two series? Are they drawn from the same familiar ‘tool kit’ of forms that occur in languages with nominative-accusative and ergative agreement patterns? Or is one or both of the Lakota forms an entirely new type of element that we need to add to the inventory of forms available in Agreement Theory?

The current agreement ‘tool kit’ includes the forms that we saw above in Italian. True agreement usually cross-references only nominatives (often called absolutes in ergative languages) and it is the only kind of agreement that occurs in many languages (e.g. English, Icelandic, Hindi). Syntactic clitics (also called bound pronouns, clitic pronouns, pronominal clitics, incorporated pronouns, object agreement, anaphoric agreement, or object markers) potentially come in any Case and can thus potentially mark or cross-reference any argument.² Ergative languages use this same inventory of cross-referencing forms. For example, Kashmiri (Wali and Koul 1997) uses true agreement and a set of syntactic clitics with ergative, dative, accusative, and nominative Case. Kashmiri is interesting because it shows us that syntactic clitics potentially come in any Case, including nominative. In Kashmiri, nominative arguments are doubly cross-referenced with both true agreement (which cross-references gender but not person) and a nominative clitic (which cross-references person but not gender):

(5) BI ch -u -s gatsha:n. [Kashmiri]  
   I.nom be -AGR(MASC.SG) -CL(NOM.1ST.SG) go-present participle  
   ‘I am going.’ (Wali and Koul 1997:152)

(6) Tse vuch -u -th -as bi.  
   you.ERG saw -AGR(MASC.SG) -CL(ERG.2ND.SG) -CL(NOM.1ST.SG) I.NOM  
   ‘You saw me (masculine).’ (Wali and Koul 1994a (4))

I have argued that other languages such as Selayarese, Yucatec Maya, and Yimas also have both true agreement and nominative clitics in their lexicons, but these languages select one or the other of these forms to cross-reference a nominative argument. The basis of this choice varies from language to language, and is determined by factors such as aspect, transitivity, and person (Woolford 2003b, 2008b).

In this paper, we will examine the details of the behavior of the active and stative series in Lakota. We will see that the stative series behaves like syntactic clitics (bound pronouns, etc.) in several ways. In contrast, I will argue that the active series behaves sufficiently differently to cast doubt on the idea that it is just another syntactic clitic series with a different case. The behavior of the active series is consistent with true agreement (although restricted to active verbs). If these

See a recent overview of issues and approaches to active-stative agreement in Donohue and Wichmann 2008.

Syntactic clitics are not always morphologically distinguished for Case, even in Italian. There are often doubling restrictions, which can potentially affect both syntactic clitics and true agreement, so that either the overt argument occurs (in its base position) or the cross-referencing form occurs, but not both at once, at least in certain syntactic configurations. The doubling restriction is particularly strong in Lakota.

Rood (personal communication) notes that if Lakota is a pronominal argument language, so that the ‘agreement’ forms are the arguments, then the terms ‘agreement’ and ‘cross-referencing element’ are not really appropriate because these forms do not actually agree with or cross-reference anything. This issue does not arise under the weaker form of the pronominal argument hypothesis advocated in Baker 1996 where arguments occupy adjunct positions and argument positions are occupied by pro forms (unpronounced free pronouns) that trigger agreement as usual. Rood and de Reuse (personal communication) favor the original form of this hypothesis in order to avoid positing pro forms for Lakota.
identifications are correct, then Lakota is another language that makes use of both true agreement and nominative syntactic clitics, selecting between these forms on some new basis.³

This paper will address the following questions about the behavior of the active and stative series of Lakota:

(7) Questions About the Behavior of the Active and Stative Series of Lakota:

1. What determines the linear order of these forms?
2. What role does person play in ordering these forms?
   And why is the effect of person different on the ‘active’ and ‘stative’ series?
3. What role does number play in ordering these forms,
   and why is the effect of number different than the effect of person?
4. Why is there exactly one portmanteau form in the active series,
   and no portmanteau form in the stative series?
5. Why is a portmanteau form used with one combination of first and second person arguments, but not the opposite combination?
6. Why are there exceptions and why are they only in one direction, where the stative series cross-references an external argument, but no exceptions of the opposite type where the active series cross-references an internal argument?

I will show how these questions can be answered, under the assumption that the active series is true agreement and the stative series consists of syntactic clitics that can cross-reference any argument. The answers that I will argue for are as follows.

The relative order of the two types of cross-referencing forms is rigidly fixed in Lakota, with true agreement closer to the verb, and syntactic clitics in a more peripheral position:⁴

(8) Rigid Order in Lakota: syntactic clitics true agreement verb

When more than one syntactic clitic is present, their relative order is determined by person and number alignment to the left edge of the verb, with number taking precedence over person.⁵

³ I show in Woolford 2008a that this hypothesis is consistent with the active-stative agreement system of Choctaw, which has a morphologically marked nominative-accusative Case system (Broadwell 2006).

⁴ This fixed position of pronominal clitics preceding true agreement accounts for the generalization in Boas and Deloria 1941:67 that the cross-referencing forms are ordered such that “the object always precedes the subject”, with some exceptions, and in Rood and Taylor 1996:467 “when two affixes are present, the usual order is first the object affix, then the subject affix,” with exceptions which they list. These exceptions can be eliminated by eliminating the reference to grammatical relations, and reformulating the generalization in terms of the type of cross-referencing form, as in (8).

The statement that the left edge of the verb is the edge to which things align should not be taken too literally here. According to David Rood (personal communication) the historically correct statement for the location of the prefixes is before the verb root. Moreover, some verbs have discontinuous stems and the active and stative series are essentially infixed.

⁵ The possibility that person orders the cross-referencing forms of Lakota has been discussed in the literature, but as a replacement for the opposing generalization in the literature which states that object forms precede subject
Number Alignment: plural dual singular verb

Person Alignment third second first verb

Person also plays a role in determining when a portmanteau agreement form is used. The reason has to do with the fact that person alignment, in the technical sense from Optimality Theory (McCarthy and Prince 1993, Prince and Smolensky 1993, 2004), is not fully satisfied when both a first and a second person element are present, unless both are simultaneously aligned to the same edge: only a portmanteau form can satisfy this requirement. Yet a portmanteau form is not always possible. There are severe restrictions on portmanteau formation cross-linguistically. In Lakota, only true agreement can occur in a portmanteau form; syntactic clitics (bound pronouns) cannot. Portmanteau agreement formation in Lakota is subject to a person restriction which is also found in several other languages, but which is not universal:

Person Restriction on Portmanteau Agreement Formation: 

In a portmanteau form, the person of the subject must be higher than or equal to the person of the object.

There is also a number restriction on portmanteau forms. We will see that a portmanteau agreement form is used in Lakota whenever it is both needed and possible.

One of the most interesting questions among those posed above is the last one: why is the correlation between the stative series and internal arguments not perfect? Williamson 1979 and Legendre and Rood 1992 analyze an exception involving reflexives where the stative series cross-references the subject of active verbs when they take reflexive form. I will discuss another exception involving the first person dual where I argue that a syntactic clitic is used to cross-reference the subject of an active verb in order to obey number alignment.

What is left unanswered in this paper is exactly why/how the active series is restricted to active verbs. Although this question will not be entirely resolved here, I will discuss four possible approaches. The first approach is to posit a covert ergative/active Case system in Lakota, of the type that occurs in Basque. The second approach is to add a new kind of true agreement to our ‘tool kit’, inherent agreement, which is like inherent Case is being determined at the argument structure level. The third approach is to restrict true agreement to active verbs (or external arguments) with a selectional restriction in the lexicon. The last approach is to unify the fact that agreement cannot be used with stative verbs in Lakota with the fact that velar palatalization cannot occur in stative verbs in Lakota, a correlation pointed out by Rood and Legendre 1992. Both restrictions can be analyzed as instances of positional or contextual faithfulness under the model developed for phonology in Beckman 1998 and Smith 2001. I have used this model to analyze aspect splits involving Case and agreement in Woolford 2007b, 2008b. Selecting among forms. Schwarz 1979 and others have suggested that a non-standard person hierarchy of “third-first-second” determines the order of these forms. However, that generalization encounters exceptions when transitive statives are considered. Moreover, the work that generalization it is designed to do is done better by the ordering principle in (8). I argue that person alignment is active in Lakota, but that it makes use of only the standard person hierarchy.

6 Heath 1998 gives Northern Iroquoian as an example where 1→2 combinations require a portmanteau form, but 2→1 combinations do not. However, Heath cites West Greenlandic Eskimo as a language in which both 1→2 and 2→1 combinations are represented by portmanteau forms. We will see additional examples below.
these proposals will require consideration of theoretical and typological considerations beyond Lakota, and this issue will be left open here.

This paper is organized as follows. Section 1 shows the ways in which the stative series behaves like syntactic clitics (bound pronouns, etc.) in other languages. This section begins with a discussion of the properties and behavior of syntactic clitics in other languages as background for comparison with Lakota. We then turn to the analysis of how sequences of two syntactic clitics are ordered in Lakota by person and number alignment. Section 2 focuses on the analysis of the active cross-referencing series of Lakota as true agreement, and the exceptions that occur to the basic generalization that the stative series cross-references only internal arguments. This section includes a discussion of the motivation for, and the conditions on, portmanteau agreement formation. Section 3 discusses four possibilities for addressing the question of how the grammar of Lakota restricts true agreement (the active series) to active verbs.

1 The Stative Series of Lakota

In this section, we will examine the stative series of Lakota and the ways in which these forms behave like syntactic clitics (also called bound pronouns, etc.) in other languages. This section begins with a discussion of some of the properties of syntactic clitics in other languages, and how these forms differ from true agreement. I will then show that the stative series of Lakota shares these properties. We will then turn to the effects of person alignment and number alignment on the ordering of these forms, and the evidence that number alignment outweighs person alignment.

1.1 Syntactic Clitics in Other Languages

In languages that have syntactic clitics, these forms have the potential to cross-reference any argument, although they typically cross-reference only arguments that are not cross-referenced by true agreement. In languages that allow more than one syntactic clitic per clause, these forms may be morphologically distinguished by case, and they must match in (abstract) case with the argument they cross-reference. We saw above that Italian, like other Romance languages, allows more than one syntactic clitic per clause. These syntactic clitics are distinguished by morphological case in the third person. These clitics form a clitic cluster at the left edge of the verb/verb phrase. The example below from Italian has both a dative and an accusative clitic:

(12) Maria me lo spedisce. [Italian]
    Maria 1stDAT.CL 3rdACC.CL sends.3rdAGR
    ‘Maria sends it to me.’

Bantu languages also have syntactic clitics (known as object markers in the Bantu literature). These cluster at the left edge of the verb as in Romance:

(13) A- ka- ga- mu- m- pé -er -a. [Runyambo]
    AGR- TNS - 3rdCL - 3rdHUMAN. CL 1stCL give -APPL -MOOD
    ‘She gave it to him for me.’ (Rugemalira 1993 (8))
1.1.1 Ordering Syntactic Clitics by Person

Sequences of two or more syntactic clitics are typically rigidly ordered, and various factors may be involved in determining this order. One common factor is person. In the Bantu language Haya, the syntactic clitic with the higher person is aligned closer to the left edge of the verb, as shown in the examples below. These sequences of syntactic clitics are ambiguous because there is no indication of which one cross-references which object:

(14) a. A- ka- **mu- n-** deet -el -a.                 [Haya]  
   3rdAGR- TNS - CL3rd-CL1st- bring -APPL-MOOD  
   ‘He brought him to me.’ or ‘He brought me to him.

   CL1st -CL 3rd  
   (Duranti 1979:40)

(15) a. A- ka- **ku- n-** deet -el -a.                 [Haya]  
   AGR TNS- CL2nd CL1st -bring -APPL -MOOD  
   ‘He brought you to me.’ or ‘He brought me to you.’

   b. *A-ka- **n- ku-** deet-el-a  
   CL1st -CL2nd  
   (Duranti 1979:40)

(16) a. A- ka- **mu- ku-** deet-el-a.                 [Haya]  
   AGR TNS- CL3rd CL2nd bring-appl-MOOD  
   ‘He brought him to you.’ or ‘He brought you to him.’

   CL2nd CL3rd  
   (Duranti 1979:40)

We will see in section 1.2 that person alignment is involved in determining the order of syntactic clitics (the stative series) in Lakota as well.

1.1.2 Nominative Syntactic Clitics and True Agreement

It will be important for the analysis of Lakota presented below to know that there are languages whose lexicon contains both true agreement and a full set of syntactic clitics, including one that can cross-reference nominatives. One somewhat unusual example mentioned in the introduction to this paper is Kashmiri, which uses both true agreement and nominative syntactic clitics together to cross-reference the features of nominative arguments. Other languages that make use of both true agreement and nominative syntactic clitics select between these two ways of cross-referencing nominatives, depending on various factors, one of which is aspect. An example of such a language is Yucatec Maya (Bricker 1981, Woolford 2008b). In intransitives in the perfective/completive aspect, Yucatec Maya uses a cross-referencing form labeled Set A in the Mayan literature, which I argue is a syntactic clitic. This form suffixes to the verb, as in (17).

(17) H **meyah-n -ah -en.**                       [perfective aspect]  
   COMPLETE work –N -PERF -CL.NOM.1st  
   ‘I have worked.’                           (Krämer and Wunderlich 1999 (1d), reglossed)  
   from Bricker and Yah 1981)
In the imperfective/incomplete aspect, Yucatec Maya uses Set B, which I identify as true agreement, to cross-reference intransitive subjects. This form suffixes to a preverbal functional head or prefixes to the verb:

(18) K -in meyah. [imperfective aspect]
    INCOMPLETE -AGR.1st work
    ‘I am working.’ (Krämer and Wunderlich 1999 (1c), from Bricker and Yah 1981)

This aspect split does not occur in transitive clauses. Instead, transitive clauses have a very ordinary pattern with true agreement cross-referencing the subject and a syntactic clitic cross-referencing the object:

(19) Táan uy-il -ik -en. [imperfective aspect]
    dur AGR.3rd - see -IMPERF -CL.1st
    ‘He is seeing me.’ (Bricker 1981 (1))

What these languages show us is that a single language can have in its lexicon both true agreement (limited to nominatives) as well as a full set of syntactic clitics (including one that can cross-reference nominatives). Thus the mere fact that an element can cross-reference a nominative does not necessarily tell us what kind of cross-referencing form that element is.

1.1.3 Distinguishing Syntactic Clitics from True Agreement

Although it is sometimes easy to distinguish syntactic clitics from true agreement, it can be difficult when both are realized as affixes and Case is not morphologically marked in the language. In this section, I discuss some reliable and unreliable means to distinguish these types of forms.

In languages with second position clitics, the difference between true agreement and a syntactic clitic is easy to see. Selayarese (Austronesian) has second position clitics which suffix to the verb in the verb initial basic VOS word order, but actually attach to whatever element comes first in the clause (Finer 2000), in contrast with the position of the true agreement morpheme which is fixed as a prefix on the verb. We see this difference in the following examples. The form that cross-references the subject is prefixed to ‘cook’ in both examples, but the form that cross-references the object suffixes to ‘cook’ in the first example, but to the fronted PP in the second example:

(20) Mu-pallu i juku?-iŋjo ri koroŋ. [Selayarese]
    AGR2nd cook -CL3rd fish-DEF in pan
    ‘You cooked the fish in the pan.’

I argue that the alternative of using syntactic clitics for both subject and object in Yucatec Maya is blocked by an independently motivated constraint against two syntactic clitics in one clause that holds in this language (Woolford 2008b).

The Mayan languages are usually described as ergative, although this is not supported by any morphological case on arguments. Krämer and Wunderlich (1999) discuss some of the reasons why that view is problematic for Yucatec Maya. In Woolford 2000, I show that it is not necessary to claim that the other Mayan languages have a covert ergative Case system in order to account for their superficially ergative agreement pattern.
‘In the pan, you cooked the fish.’ (Finer 2000 (11))

However, syntactic clitics often occur in a relatively fixed position in the clause, and they may even be realized phonologically as affixes (Zwicky 1977). 8 Formalizing an observation in Zwicky 1977, Marantz 1988 distinguishes two kinds of syntactic clitics, those that attach to heads (head clitics) and those that attach to phrases (phrasal clitics). The behavior of syntactic clitics at the phonological level is affected by a complex interaction of factors involving syntax and phonology (Zwicky 1977).

In languages where both true agreement and syntactic clitics are realized as affixes, we have to look to the syntactic properties that distinguish these two kinds of cross-referencing forms. In the restrictive version of Agreement Theory that I am assuming here, syntactic clitics have at least two properties that distinguish them from true agreement. 9 One is the number of each type that can occur per clause. There can only be one instance of true agreement per clause. In contrast, some languages allow more than one syntactic clitic per clause, as we saw above in the examples from Romance and Bantu. Thus the possibility of using two forms from the same series in the same clause is a good indication that the series consists of syntactic clitics. The other means of distinguishing syntactic clitics from true agreement is by the Case of the element(s) that each type can cross-reference. True agreement must cross-reference a nominative argument (if one is present in the clause), but syntactic clitics can potentially cross-reference an argument with any Case. Thus, a cross-referencing element that specifically targets an accusative or dative argument (in a clause which also contains a nominative argument) must be a syntactic clitic. The use of Case as a diagnostic is more difficult in languages where Case is not morphologically marked. Fortunately, there are only a few different kinds of Case systems that are (well-)

8 What I call syntactic clitics here are referred to in Zwicky (1977) as special clitics, because they have a special status in syntax.

9 One property that has been used in the literature to distinguish the two kinds of cross-referencing forms is whether or not the form can double an overt argument. For example, Bresnan and Mchombo (1986) distinguishes between ‘grammatical agreement’ (subject agreement) and ‘anaphoric agreement’ (object markers) in the Bantu language Chichewa, based on whether or not these forms can double an overt argument in its base position. However, we now know that the base position of subjects is also inside the VP (vP), so that subjects in Bantu are not in their base position. Moreover, VSO languages often place doubling restrictions on agreement that are also related to whether or not the subject is in its base position. Languages vary considerably in the conditions under which both kinds of cross-referencing forms can double an overt argument and these conditions appear to depend as much on the syntactic configuration as on the forms themselves. I do not consider such doubling restrictions to be a reliable indicator of the type of cross-referencing form involved.

10 I restrict the discussion here to verbal agreement. A clause can also have the type of agreement that is often called concord, e.g. between and adjective and a noun (tall-m.pl men) or on a predicate adjective (The men are tall-m.pl.). What I exclude is a form of true verbal agreement that targets accusatives; cross-referencing forms that have been identified as ‘object agreement’ in the literature, including some of my own previous work, I now conclude are better analyzed as syntactic clitics.

11 Some languages limit syntactic clitics to one per clause, e.g. Chichewa, Selayarese, Yucatec Maya. Thus while the presence of more than one form from a cross-referencing series in the same clause is a good diagnostic for identifying the forms as bound pronouns/syntactic clitics, a limitation of one per clause tells you nothing.

12 The few exceptions to the generalization that true agreement is limited to nominative arguments (except in portmanteau forms), occur in clauses with no nominative; in that situation, a few languages allow agreement with one (specific) alternate Case. See Woolford 2006b.
documented in the typological literature: nominative-accusative, classic ergative and
ergative/active. The latter two types both use ergative Case, but they differ in whether ergative
Case is limited to transitives or not. In the absence of any evidence to the contrary, it is likely
that learners assume that the abstract Case system involves only the unmarked structural Cases
nominative and accusative. The hypothesis that I explore in this paper is that, despite the active
pattern of its agreement system, Lakota has a nominative-accusative abstract Case system, and
that its cross-referencing forms are true agreement (limited to nominatives/subjects) and syntactic
clitics (which potentially cross-reference any argument). (In section 3, I examine the alternative
possibility that the abstract Case system of Lakota is ergative/active.)

1.2 The Lakota Stative Series As Syntactic Clitics

The stative series of Lakota has two properties that are consistent with syntactic clitics
(bound pronouns, etc.), but not with true agreement. First, the stative series is not limited to
subjects/nominatives: this series cross-references objects and some subjects (usually only of
stative verbs). Second, it is possible to have two stative forms in the same clause (with transitive
stative verbs). We see both of these properties in the example below:

(22) Iye- wičha- ma- čheča.
loc 3rdpl.anim.CL 1stsg.CL resemble
‘I resemble them.’ (Williamson 1979:360)

The stative series in Lakota is not internally distinguished by morphological Case. That is,
in the lexicon, there is probably just one series, without a Case feature, which can potentially
cross-reference any argument. In the following pair of examples, we see the first person form
from the stative series being used to cross-reference the subject of a stative verb, and the object of
an active verb:

(23) Ma- ištime. (pronounced mištíme)
1stsg.CL sleep
‘I sleep.’ (Legendre and Rood 1992:387)

(24) Ma- kte. (active verb; 3rd agreement is zero)
1stsg.CL kill
‘He kills me.’ (Williamson 1984:84)

We see the same pattern for the second person stative forms in the next pair of examples:

(25) Ni- t’ē.
2ndCL die
‘You die.’ (Williamson 1984:84)

(26) Ni- kte. (active verb; 3rd agreement is zero)
2ndCL kill
‘He kills you.’ (Williamson 1984:84)

13 Tripartite Case systems are also ergative, but transitive objects are accusative instead of nominative.
14 Ullrich (personal communication) notes that verbs with two stative forms are easy to elicit, but it is common
for speakers to use an alternate paraphrase, instead of a clause with two stative forms, in spontaneous utterances.
Moreover, verbs with two stative pronouns do not appear in contemporary texts and are rare in older written sources.
15 I regloss the stative series as syntactic clitics in the Lakota examples.
Table of stative forms (syntactic clitics) in Lakota (See Rood and Taylor 1996)\textsuperscript{16}

<table>
<thead>
<tr>
<th>Stative series</th>
<th>subject (nominative)</th>
<th>object (accusative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} sg</td>
<td>ma</td>
<td>ma</td>
</tr>
<tr>
<td>1\textsuperscript{st} dual inclusive</td>
<td>ŭ(k)</td>
<td></td>
</tr>
<tr>
<td>1\textsuperscript{st} dual exclusive/plural</td>
<td>ŭ(k) ... pi</td>
<td>ŭ(k) ... pi</td>
</tr>
<tr>
<td>2\textsuperscript{nd} sg</td>
<td>ni</td>
<td>ni</td>
</tr>
<tr>
<td>2\textsuperscript{nd} plural</td>
<td>ni ... pi</td>
<td>ni ... pi</td>
</tr>
<tr>
<td>3\textsuperscript{rd} sg</td>
<td>∅</td>
<td>∅</td>
</tr>
<tr>
<td>3\textsuperscript{rd} pl animate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>collective</td>
<td>wičha</td>
<td>wičha</td>
</tr>
<tr>
<td>distributive</td>
<td>∅ ... pi</td>
<td></td>
</tr>
</tbody>
</table>

There are a couple of differences in the stative forms for subjects and objects (but whether these differences have anything to do with abstract Case is not clear). When cross-referencing a subject, the overt form of the third person plural element from the stative series is used in the collective, but a zero form is used in the distributive (plus the plural number marker –pi which follows the verb) (Rood and Taylor 1996):

(28) Wičha-\textsuperscript{3rd pl.anim.CL} hąske.  
‘They are tall.’ (collective) (Rood and Taylor 1996: 465)

(29) Hąska pi.  
‘They are tall.’ (distributive) (Rood and Taylor 1996: 465)

But when cross-referencing an object, “there is no collective versus distributive distinction: the collective affix of the stative paradigm is used for all animate plural objects. (Rood and Taylor 1996).”

\textsuperscript{16} The plural marker –pi follows the verb. The (k) of the 1\textsuperscript{st} dual form is used when a consonant (other than glottal stop) follows (Rood and Taylor 1996:464. The collective versus distributive distinction in third person appears to be limited to human subjects according to Rood and Taylor 1996:465.
(30) Wičha- 3rd.pl.anim.CL kte. kill
      ‘He kills them.’ (Williamson 1984:84)

When used to mark a subject, the form $u(k)$, when used alone, indicates the dual inclusive. In contrast, this form is never used alone to cross-reference objects: “there is no separate form for the dual; pi is used with $u(k)$ whenever it marks the object (Rood and Taylor 1996).”

Let us now turn to the question of what determines the relative order of two stative forms. We will see that factors that order syntactic clitics in other languages are also relevant in Lakota.

### 1.2.1 Person Alignment

The relative order of two stative cross-referencing forms in Lakota is fixed (Boas and Deloria 1941, Williamson 1979, Rood and Taylor 1996). I argue that this order is determined by person alignment, just as we saw in Haya above. In Lakota, as in Haya, sequences of two syntactic clitics are ambiguous because there is no indication of which one cross-references which argument:

(31)  
Iye- ni- ma- čheča.  
loc 2nd CL 1st sg CL resemble  
‘I resemble you.’ or ‘You resemble me.’  

(32)  
I- ni- ma- ta.  
loc- 2nd CL 1st sg CL proud of  
‘I am proud of you.’ or ‘You are proud of me.’  

(33)  
I- ni- ma- šteča.  
loc 2nd CL 1st sg CL ashamed of  
‘I am ashamed of you.’ or ‘You are ashamed of me.’  
(Williamson 1979:359)

Both Lakota and Haya use a standard person hierarchy to align syntactic clitics:

(34) Standard Person Hierarchy:  
$1^{st} > 2^{nd} > 3^{rd}$

Person alignment aligns the syntactic clitic with the higher person to the left edge of the verb in both languages. Exceptions in Lakota involve the first person dual/plural form, and I will argue that these exceptions are caused by number alignment, to which we now turn.

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17 The order is “only –nima.” (Boas and Deloria 1941:77). “In the stative transitive verbs, ni always precedes ma, regardless of the grammatical functions of the affixes. The meaning of verbal forms of this kind is therefore ambiguous (Rood and Taylor 1996:468).”

18 Rood and Taylor 1996:467-468 note that an ordering principle in terms of person (third-second-first) would account for the fixed order of the ni ($2^{nd}$) and ma ($1^{st}$) affixes in transitive stative verbs such as those shown above in examples (31) through (33). However, they conclude that “the object-subject description seems better,” although it requires a list of several exceptions. Unstated in their discussion is the assumption that there can only be one affix ordering principle operating in a language. I argue that several ordering principles are active in Lakota, but that they are ranked in a way that establishes their relative priority.
1.2.2 Number Alignment

Number alignment has an important effect on syntactic clitics in Lakota. Singular forms are aligned closer to the verb:

(35) Lakota Number Alignment: plural dual singular verb

Number alignment outweighs person alignment in Lakota. We see this in the examples below where the subject clitic is first person dual, and the object clitic is second person singular. The person hierarchy would require the first person form to be placed closer to the verb, but here the number hierarchy prevails instead, so that the second person form, *ni*, is placed closer to the verb because it is singular while the first person form is dual.19

(36) *Iye-ů- ni- čeča pi.*
   loc 1st dualCL 2nd sgCL resemble plural
   ‘We (pl.) resemble you.’

(37) *Ůk-i- ni- šteča pi.*
   1dualCL loc 2ndCL ashamed of plural
   ‘We (pl.) are ashamed of you.’

Person and number alignment also have some interesting, but less obvious consequences for the active series (true agreement), to which we now turn.

2 The Active Series of Lakota As True Agreement

In this section, we examine the behavior of the active cross-referencing forms of Lakota and the reasons for identifying this series as true agreement.

(38) Table of Active Series Forms in Lakota (major conjugation)

<table>
<thead>
<tr>
<th></th>
<th>Active Series (True Agreement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st sg</td>
<td><em>wa-</em></td>
</tr>
<tr>
<td>1st dual</td>
<td>*ů(k)</td>
</tr>
<tr>
<td>1st &amp; 2nd</td>
<td><em>čhi</em></td>
</tr>
<tr>
<td>portmanteau form</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td><em>ya-</em></td>
</tr>
<tr>
<td>3rd</td>
<td>Ø</td>
</tr>
</tbody>
</table>

19 I would like to thank the combined efforts of Willem de Reuse and Jan Ullrich for providing me with these examples. Ullrich elicited these forms from native speakers. The 1st dual form is often ordered before the *i*-locative prefix, although Ullrich reports some speaker disagreement on this issue.
The active series of Lakota behaves like true agreement in many other languages in being limited to nominatives, although in Lakota true agreement is limited to external arguments (see section 3). Like true agreement in many other languages, the active series of cross-referencing forms in Lakota occurs in a fixed position. In Lakota, true agreement (the active series) is placed closer to the verb than the syntactic clitics (stative series).

Person alignment cannot alter this fixed order of syntactic clitics and true agreement. Thus in examples such as (43), which involve an active verb with a second person subject and a first person object, the second person true agreement form has to be closer to the verb than the first person syntactic clitic.

I regloss the active series as agreement, and the stative series as syntactic clitics in the Lakota examples.

The exception to both generalizations is the one portmanteau agreement form in Lakota, to be discussed below.

This claim is consistent with the conclusion of Boas and Deloria 1941:76 that the principle that orders the cross-referencing forms in examples such as (43) is not person, but rather that the object (affix) precedes the subject (affix). This is contra the claim in Williamson 1984 that a non-standard person hierarchy, third-first-second orders these forms in Lakota.
Nevertheless, person alignment does have an effect on true agreement in Lakota, although it is an effect of rather different kind. The effect involves portmanteau agreement, to which we now turn.

2.1 Person Alignment and Portmanteau Agreement

A portmanteau agreement form is one that simultaneously cross-references both a subject and an object, and thus carries two sets of cross-referencing features. We see a portmanteau agreement form in the Lakota example in (47) which cross-references both a first person subject and a second person object:  

(47) Čhi-           kte.  
      1st-2ndPORTAGR kill  
‘I kill you.’ (Boas and Deloria 1941:76)

I will argue that it is no accident that Lakota has only one portmanteau form, and that it is exactly this one which encodes a 1st subject-2nd object combination. I will argue that portmanteau forms are used only when they are needed, and then, only when they are possible. Person plays a role in both the motivation for portmanteau forms and the constraints on their use.

The reason that a portmanteau form is used in the example above has to do with satisfying person alignment, in the technical sense from formal alignment theory Optimality Theory (Prince and Smolensky 1993, McCarthy and Prince 1993). The portmanteau agreement form allows both first and second person to be simultaneously aligned to the same edge. This satisfies both the constraint requiring that first person be aligned to this edge, and the (lower ranked) requirement that second person be aligned to this same edge. Although a lower ranked constraint can be violated when necessary, it is better if it also satisfied. This result does not follow from the traditional view of the effect of the person hierarchy, which is merely to ‘line up forms by person’; under that view, the ‘expected’ pattern for the above example, 2ndCL-1st Agr-V, should be perfect. But under formal alignment theory, it is not perfect because it the second person is not perfectly aligned to the verb.

This raises the question of why a portmanteau form is not used in the other combination of a first and second person cross-referencing form, that is, when the subject is second person and the object is first person, as in (48):

(48) "The combination I-thee is expressed by c’i which cannot be reduced to other pronominal elements (Boas and Deloria 1941:76). “The combination of ‘I’ subject and ‘you’ object is represented in transitive (active) verbs by a single affix: ċhi (Rood and Taylor 1996:468).”

24 Following Gouskova 2003, constraints in Optimality Theory never target the lowest element on any hierarchy; thus, there is no alignment constraint targeting third person. For this reason, there is no pressure to use a portmanteau form when a third person object is involved in Lakota. (This does not mean that there will be no portmanteau forms cross-linguistically involving third person forms, because such forms may have other features that are targeted by other hierarchies.)

25 In the Haya and Lakota examples discussed above where syntactic clitics are lined up by person, the second person alignment constraint is actually violated because the second person form is not perfectly aligned to the left edge of the verb. (The first person form intervenes.) However, since first person alignment takes priority over second person alignment, this order is better than the alternative. A portmanteau form would be better yet, but neither Lakota nor Haya allow portmanteau forms of syntactic clitics. Whether portmanteau syntactic clitics are possible in other languages remains to be determined.
(48) Ma-ya-kte.
1sg CL 2sg AGR kill

The reason is that there is an independently motivated condition on portmanteau agreement that holds in Lakota.26

(49) Person Condition on Portmanteau Agreement

In portmanteau agreement, the person of the subject must be higher than or equal to the person of the object.

The example in (48) violates this condition, because the person of the subject (second) is lower than the person of the object (first). In contrast, the example above in (47) which has a portmanteau agreement form conforms to this condition because the person of the subject (first) is higher than the person of the object (second).

In the one portmanteau agreement form in Lakota, the first person subject is singular. When the subject is first person dual or plural, something else happens: the use of true agreement is blocked. Let us now turn to this interesting consequence of number alignment.

2.2 Number Alignment and Agreement Blocking

We saw in section 1 that number aligns two syntactic clitics in Lakota, and that number alignment takes priority over person alignment in ordering syntactic clitics.

(50) Lakota Number Alignment: plural dual singular verb

The question now is what effect number alignment has on true agreement. While it cannot override the rigid positioning of syntactic clitics before agreement in Lakota, it can do something even more interesting: number alignment requirements can override the usual pattern in which true agreement is selected to cross-reference an external argument. We see this in the forms that are chosen to cross-reference the arguments in a sentence such as ‘We have you.’ This is an active verb in Lakota, and thus we would expect to see a sequence consisting of a second person clitic followed by a first person plural agreement form.

(51) Expected sequence for ‘We have you.’: 2nd sgCL – 1st plAgr – verb

26 The Person Condition on Portmanteau Agreement has independent motivation in Yimas, a language of Papua New Guinea (Foley 1991). In Yimas, a portmanteau form, kampan, is used when the subject is first person and the object is second person (with additional restrictions involving number). But in the opposite combination of a second person subject and a first person object, Yimas does not use a portmanteau agreement form; instead a second person agreement form and a first person syntactic clitic is used (see Woolford 2003b). This parallels Lakota. Willem de Reuse (personal communication) points out to me that Guarani (Tupian, Paraguay) also has just one portmanteau prefix, ro- I subject-you object, which conforms to this person condition.

This Person Constraint on Portmanteau Agreement is violated in some languages. These languages use a portmanteau form even when the subject is second person and the object is first person. In OT terms, this pattern should occur when both the first and second person alignment constraints outrank the person constraint on portmanteau formation. This occurs in Southern Tiwa where a portmanteau agreement form is used when the subject is second person and the object is first person (see Rosen 1990).

Portmanteau formation is not the only strategy that languages use to avoid person alignment violations in first and second person cross-referencing forms. See Heath 1998 for a detailed survey of different strategies.
But what we find is quite different:

(52) 'Ũ- ni- yuha -pi.
  1dualCL  2ndCL  have   pl
‘We have you.’ (Boas and Deloria 1941:77)

The ‘expected’ form in (51) violates the number alignment requirement because the plural form is closer to the verb than the singular form. Number alignment must be obeyed in Lakota and it can block the use of agreement (active form) so that a syntactic clitic (stative form) is used instead. Thus, although this is a verb from the active class, two syntactic clitics are used to cross-reference its arguments in this particular person-number combination, and these two syntactic clitics are ordered as described in section 1, with number alignment taking precedence over person alignment.

Now, because the first person dual form looks the same in the two cross-referencing series, we cannot be absolutely sure that the agreement form has not been reordered with respect to the clitic in the above example. However, because the position of true agreement tends to be fixed cross-linguistically, and because there are other situations in which languages are known to switch between using true agreement and using a syntactic clitic, in order to obey alignment requirements (e.g. Yimas (Woolford 2003b)), it is more likely that this is what has happened here, and I analyze and gloss this example accordingly. If this is the correct analysis of such examples, it suggests that the selection of cross-referencing series in Lakota is rather more superficial than some formal approaches to such active-stative systems would predict.27 This issue is discussed in section 3, to which we now turn.

3 Restricting the Active Series to Active Verbs

Now that we have explored the details of the behavior of the active and stative series in Lakota, we turn to the question of how the formal grammar of Lakota restricts true agreement (the active series) to active verbs. In this section, we examine four possible approaches to this problem. The first is to posit a covert abstract ergative/active Case system in Lakota. The second is to add a new type of agreement to the theory: inherent agreement, paralleling inherent Case. The third is to add a language-specific lexical selection feature to the agreement series in Lakota. The last approach is to unite the agreement ‘split’ in Lakota with aspect ‘splits’, such as the ergative ‘split’ in Hindi and the agreement ‘split’ in Yucatec Maya, using a model from phonology that will also apply to the phonological ‘split’ in Lakota described in Rood and Legendre 1992 wherein stative verbs are immune to velar palatalization.

3.1 Positing a Covert Ergative/Active Case System

Languages with an ergative/active Case system such as Basque often have an active-stative agreement pattern as well. Can we account for the agreement pattern in Lakota by positing a

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27 A similar point is made by Rood and Legendre 1992 based on the fact that the subject of active verbs is cross-referenced with the stative series when the verb is in the reflexive form. Under their analysis, such reflexives have one argument that is simultaneously an initial 1 (external argument) and an initial 2 (internal argument); they argue that the rule mapping initial 2s to the stative series takes precedence. One might also argue, following Marantz 1984 that the external argument has been absorbed by the reflexive morpheme and that only the internal argument is agreeing. I take no position on the analysis of reflexives in Lakota.
covert/abstract ergative/active Case system? To my knowledge, this has not been proposed for Lakota, but it seems like an obvious hypothesis to consider.

One reason this hypothesis may not have been considered involves confusion caused by the fact that a language that uses ergative Case is not necessarily an ergative language under the classic definition based on languages such as Dyirbal (Dixon 1994). The classic definition of an ergative language is one where ergative Case is restricted to transitive clauses. In contrast, languages where ergative Case marks all external arguments, whether or not the clause is transitive, is classified typologically as an active language. Basque is such a language (Levin 1989). Let us examine the Case and agreement patterns of Basque to determine whether it is like or unlike what we find in Lakota.

Intransitives divide into two classes in Basque, depending on whether they take an external argument or not. The choice of auxiliary correlates with these classes: the ‘have’ auxiliary is used in clauses with an external argument and the ‘be’ auxiliary is used in clauses without an external argument.

External arguments are marked with ergative Case, which is an inherent Case licensed by the head that licenses external arguments (See Woolford 2006). Other subjects are marked with nominative Case.

(53) Gizon-ak kurritu du.
man-ERG ran HAVE
'The man ran.' (Levin 1989 (33))

(54) Hi-k ongi dantzatu duk.
you-ERG well danced HAVE
'You have danced well.' (Laka 1993a (5c))

(55) Ni etorri naiz.
I. NOM come BE
'I came.' (Levin 1989 (8))

(56) Aiton-a hil da.
grandfather-det.NOM die.PERF BE
'The grandfather has died.' (Joppen and Wunderlich 1995 (26c))

Basque cross-references ergative arguments with an ergative syntactic clitic and dative arguments with a dative syntactic clitic. These syntactic clitics suffix to the auxiliary. Basque uses true agreement to cross-reference nominatives (often called absolutes in ergative languages). True agreement prefixes to the auxiliary.

(57) Basque cross-referencing pattern: true agreement-aux-dative clitic-ergative clitic

28 Confusion is further increased by the fact that linguists use different definitions of ‘transitive’ to force active languages to fit the classic definition. It is common to find ‘transitive verb’ defined as a verb that takes an external argument; but that definition would not work for the classic ergative pattern in Dyirbal.

29 In Basque, it is common to use a light verb construction, something like ‘I did some work.’ instead of a plain intransitive with an agentive subject like ‘I worked.’ This reduces the frequency of the use of ‘unergative’ verbs. (The term ‘unergative’ is most unfortunate since these are exactly the verbs that get ergative Case.) See Levin 1989, Laka 1993b.

30 See Laka 1997 for a detailed look at agreement in Basque.
Is the agreement system of Lakota like that of Basque, but based on a covert ergative/active Case system? If so, the active series of Lakota would correspond to an ergative syntactic clitic (cross-referencing all and only external arguments). The stative series of Lakota would correspond to true agreement.

The fit is initially appealing in that it corresponds to the view in work such as Williamson 1979, Dahlstrom 1983, Van Valin 1985, and Legendre and Rood 1992 that the active series of Lakota marks initial 1s or agent protoroles, which is the same thing as saying this series cross-references external arguments in the terminology of Grimshaw 1992 and Kratzer 1996. This is expected if the subjects of active verbs in Lakota have covert/abstract ergative Case, since ergative Case is an inherent Case that marks external arguments (Woolford 2006a).

The fit is not good when it comes to the stative series of Lakota. If the Basque model fit, the stative series would have to be true agreement (rather than a syntactic clitic as argued here). However, since true agreement cross-references nominatives, this would mean that there are two nominative arguments in transitive stative constructions in Lakota, and that there are two true agreement forms in one clause. This is not typologically motivated.

The Basque ergative/active model would require identifying the active and stative cross-referencing series in exactly the reverse of the identifications argued for in sections 1 and 2 of this paper, where it is active series that is identified as true agreement, not the stative series.

It is important to note that, although there are probably some languages with an active-stative agreement system that do fit the Basque model, we cannot conclude that all active-stative agreement patterns involve a (covert) ergative/active Case system. The reason is because there is at least one language with an active-stative agreement pattern very much like what we see in Lakota, that has a morphologically marked nominative-accusative Case system; that language is Choctaw (Broadwell 2006, Woolford 2008a). In my view, positing an abstract ergative/active Case pattern is not the right solution for Lakota.

Is there a way to make the Lakota agreement pattern follow from a different abstract Case system? No, none that is typologically motivated. Williamson 1984 posits an abstract Case system for Lakota involving nominative and accusative Case, but in a deviant pattern not listed in any book on typology. In Williamson’s proposal, only the subjects of active verbs (arguments with initial 1s/external arguments) get nominative Case, while the subjects of all
stative/unaccusative verbs get accusative Case. To my knowledge, no language with morphological case manifests this case pattern.

3.2 Inherent Agreement

The agreement ‘tool kit’ that I outlined at the beginning of this paper has no forms that refer to argument structure categories (e.g. the external argument, initial 1, agent proto role). However, there is a type of Case that does make reference to argument structure categories: inherent Case. In the section just above, we explored the idea that the active series of Lakota marks external arguments. In this section, we explore the idea of adding a new type of agreement to the theory, properly called inherent agreement, which would mark argument structure categories.

The technical means of accomplishing this would be to allow the head that licenses external arguments (little v) to contain agreement features so it could agree with the argument that it theta-marks. It would not be necessary to posit a form of inherent agreement that targets internal arguments (initial 2s, patient protoroles) under this approach. Instead, syntactic clitics could cross-reference any argument not cross-referenced by inherent agreement. This would fit in well with what I have argued in sections 1 and 2 of this paper, replacing the true (syntactic) agreement there with true inherent agreement with external arguments.

This system could also have the needed flexibility to allow for exceptions, assuming that inherent agreement is treated like inherent Case in syntax, which may be preserved or replaced with structural Case (Woolford 2001, 2007a).

To determine whether or not this is the right approach for languages such as Lakota, we need to consider the typological predictions of enriching agreement theory with this new type of true agreement. One prediction is that it should be possible for a language to have only this new type of inherent agreement, but neither true (syntactic) agreement nor syntactic clitics. In such a language, the prediction would be that only external arguments would be cross-referenced. This pattern might actually occur. According to Donohue and Brown 1999, Nias has verbal agreement with transitive subjects, but no agreement for intransitive subjects or objects. If these transitive subjects are all external arguments, then this pattern occurs.

However, another predicted type of language under this approach does not appear to occur (to my knowledge). We ought to find languages with this inherent agreement that also have the ordinary sort of true (structural) agreement that we find in English. In a nominative-accusative language of this sort, there would be two true agreement series, an inherent series cross-referencing external arguments and the regular structural agreement cross-referencing nominative subjects that are internal arguments. No objects would be cross-referenced. I know of no such language.31

31 There is also a potential technical problem with the inherent agreement approach with respect to Lakota. It is not clear that inherent ergative agreement could occur in a portmanteau form which also cross-references an internal argument, because inherent agreement, by definition, would target one specific semantic type of argument.
(62) Predicted type of active-stative language:

<table>
<thead>
<tr>
<th>Type</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>intransitive with an external argument</td>
<td>(Sa) inherent agreement</td>
</tr>
<tr>
<td>intransitive with an internal argument</td>
<td>(So) structural agreement</td>
</tr>
<tr>
<td>transitives subject (if an external argument)</td>
<td>(A) inherent agreement</td>
</tr>
<tr>
<td>object</td>
<td>(O) no agreement</td>
</tr>
</tbody>
</table>

If languages with an active-stative agreement pattern always use the form that marks objects to mark one class of intransitive subjects, we need for our theory to capture this fact, preferably by its inability to generate an active-stative pattern as in (62) where objects are not marked.

Another prediction of adding inherent agreement to our agreement ‘tool kit’ is that we ought to find inherent agreement that targets goas/experiencer arguments, the arguments that are marked with inherent Case in many languages. To my knowledge, datives are only cross-referenced with dative syntactic clitics cross-linguistically, and I have certainly never encountered a language in which only datives agree.

Unless we can show that adding this new type of agreement, inherent agreement, to the theory is typologically warranted, we should look elsewhere for a solution to active-stative cross-referencing systems. The next two solutions add no new type of agreement; instead they place restrictions on the use of the types of cross-referencing forms that are already known to exist.

3.3 A Selectional Restriction on True Agreement

In this section, we explore a very simple (and some might say stipulative) way to produce the Lakota agreement pattern. If our problem is only that true agreement is restricted in Lakota so that it can only be used with active verbs or that it only targets external arguments, why not solve the problem by placing a selectional restriction on true agreement forms (the active series) in the Lakota lexicon?

(63) Lexical Selection Approach: (one possible version)

true agreement [+external argument]

syntactic clitics

It would not be necessary, or even desirable to place a similar restriction on syntactic clitics (stative forms) since these can, in exceptional situations, be used with an external argument.

As for the typological predictions of this approach, we expect to find a language that is like English, except that true agreement has a selectional feature [+external arguments]. This language would not cross-reference objects at all. As noted above, this prediction may be realized in the language Nias which Donohue and Brown 1999 describe as cross-referencing only transitive subjects.

However, we cannot really evaluate this approach without embedded it in a theory of what kinds of selectional restrictions can and cannot occur, and what kinds of lexical items can carry such restrictions. For example, could we place the same selectional restriction on syntactic clitics, instead of on true agreement?
(64) Lexical Selection Approach: (another predicted language)

true agreement

syntactic clitics [+external argument]

If so, then this approach makes the same undesirable prediction in (62) as the inherent agreement approach does, except that syntactic clitics cross-reference external arguments and (assuming a nominative-accusative Case system) true agreement cross-references subjects that are not external arguments, and objects are not cross-referenced at all.

Without a theory to restrict the selectional restriction approach, it seems to predict kinds of languages that may not occur.

3.4 Splits and Contextual Faithfulness

The fourth approach to the active-stative agreement pattern of Lakota attempts to unite this ‘split’ in agreement to other kinds of ‘splits’ in Case and agreement that have been documented in the typological literature. For example, Hindi and related languages restrict ergative Case to the perfective aspect, and are described as ‘split ergative’ languages. We saw an example involving agreement in section 1 of this paper involving Yucatec Maya, which has an aspect ‘split’ involving agreement in intransitive clauses.

There is no standard account of such ‘splits’ in Case and agreement. However, there is a fairly standard account of a parallel phenomenon in phonology developed within Optimality Theory (Beckman 1998). Although these are not called ‘splits’ in phonology, there are many situations in which the normally expected range of something is limited to a particular context. One standard example in phonology discussed by Beckman 1998 involves voiced consonants. While many languages allow voiced consonants to occur anywhere that consonants can occur, there are languages that restrict voiced consonants to the onset position of syllables. Beckman argues that there are privileged contexts in which a certain feature such as [+voice] are protected against a general prohibition against [+voice] consonants that applies outside the protected environment. Smith 2001 discusses examples where the protected environment is nouns. The stress on nouns is preserved and protected in some languages from general rules that alter stress elsewhere, e.g. on verbs. This phenomenon is called ‘positional faithfulness’ in Beckman 1998, although with the additional environments discussed by Smith, ‘contextual faithfulness’ would be a more descriptive term. The basic idea is that certain contexts are protected from rules that would otherwise change things, e.g. by deletion, insertion, or otherwise altering features.

What is especially interesting to us here is that Lakota manifests such a ‘split’ in its phonology, and the protected context is just the one we need to explain the agreement ‘split’ in Lakota. This phonological phenomenon is discussed by Rood and Legendre 1992 as an example of a phonological correlation with split intransitivity. As in many languages, velars palatalize (k changes into č) after the vowels i and e. This palatalization rule applies in active verbs in Lakota, but stative (unaccusative) verbs do not undergo this rule. This is another clear example of positional/contextual faithfulness, where velars in stative verbs are protected from the change that the rule of palatalization causes elsewhere. Like the examples discussed by Smith where nouns are the protected context, this Lakota example involves a category of words, stative verbs, as the protected context.
I have argued elsewhere that aspect splits involving ergative Case are examples of the same phenomenon (Woolford 2008b). In languages such as Hindi, the syntactic context that is protected from change is the perfective aspect. The change that this context is protected from is the deletion of the inherent ergative Case and its replacement by the structural nominative Case. That change occurs outside the protected environment, that is, in the imperfective aspect. I argue that this kind of split has a function, which I call Parasitic Marking. In a sense, ergative Case is pressed into service in languages such as Hindi to mark aspect. This is accomplished by manipulating the distribution of ergative Case to correlate with aspect.

Yucatec Maya manipulates the distribution of true agreement in intransitive clauses to correlate with, and thus parasitically mark aspect. A violable constraint prohibits the use/insertion of true agreement in the perfective aspect. As we saw in section 1, a syntactic clitic is used instead in intransitives in the perfective aspect.

In Lakota, the use/insertion of true agreement is prohibited in exactly the same context that Lakota prohibits velar palatalization: stative verbs. Thus both patterns can be captured with positional/contextual faithfulness constraints that make reference to the same context: stative verbs. The function of both constraints is the same in my view: they provide an economical way of signaling the presence of an active vs a stative verb. Because true agreement is blocked in statives, its presence comes to signal the presence of an active verb, hence the name ‘active series’.

As with the approaches discussed above, we will need to consider the typological predictions of this approach. Before we can do that, we will need to know more about what the class of possible protected contexts is.

3.5 An Open Question

Given that the decision as to which of these possible formal approaches, if any, is correct for Lakota rests on typological and theoretical considerations beyond the scope of this paper, I will leave this question open here. Nevertheless, the evidence so far seems to favor an approach with some flexibility, in which the cross-referencing forms in Lakota are not completely determined by Case, argument structure, or verb class, but rather by an interaction of these and other factors such as person and number.

4 Conclusion

The goal of this paper has been to approach the problem of agreement in Lakota, from the bottom up in a sense, by looking at the details of the behavior of the two series of cross-referencing forms. This paper explored the extent to which the active and stative series of Lakota behave like known types of cross-referencing forms that occur in nominative-accusative, and ergative languages: true agreement and syntactic clitics.

The focus of this paper has been on accounting for the factors that determine the order of cross-referencing forms and the conditions under which a portmanteau form is used. The stative

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32 I will not discuss the technical means of formalizing such positional faithfulness constraints within Optimality Theory here, but I refer the interested reader to Beckman 1998 and Woolford 2007b, 2008b.
series of Lakota behaves like syntactic clitics in other languages in several ways. These forms are aligned to the left edge of the verb by person, as in the Bantu language Haya. The stative series in Lakota is not morphologically marked for Case, but like syntactic clitics in many other languages, these forms can cross-reference any argument that is not cross-referenced by agreement. It is possible in some languages to have more than one syntactic clitic per clause, but not more than one true agreement form; thus the existence of transitive stative verbs supports the idea that the stative series consists of syntactic clitics.

The active cross-referencing series of Lakota behaves like true agreement in other languages in that it occurs in a fixed position which cannot be changed by person or number alignment. The active series also behaves like true agreement in that it can only cross-reference nominative arguments (subjects); but like true agreement in Yucatec Maya, its distribution is restricted further.

We have seen that number alignment takes precedence over person alignment in Lakota. Number alignment can even change the normal pattern of using true agreement to cross-reference an external argument. When the normally expected combination of one clitic plus a true agreement form in an active transitive verb would violate the requirements of number alignment, the combination of two syntactic clitics, properly ordered, is substituted.

Portmanteau agreement is used in Lakota whenever it is both needed and possible. It is needed when both a first and a second person form are present, and both need to align perfectly to the left edge of the verb; this is not possible unless both are combined in one form. However portmanteau agreement is constrained by a principle that is independently motivated in an unrelated language from Papua New Guinea, Yimas: the person of the higher argument cannot be lower than the person of the lower argument. Thus, portmanteau agreement cannot be used in a sentence with a second person subject and a first person object. Syntactic clitics cannot occur in portmanteau forms in Lakota.

If the conclusion reached here concerning the identity of the active and stative cross-referencing series of Lakota is correct, it still remains to be determined exactly how Lakota restricts true agreement to active verbs. I have explored four approaches here, but I have left the issue open. One is the idea that Lakota has a covert ergative/active Case system. Another is to add a kind of agreement to the theory, inherent agreement, that marks external arguments. A third approach is to add a selectional feature to agreement in Lakota restricting this series to external arguments. The last is to unite this split S agreement system with other splits in both syntax and phonology using the idea of positional/contextual faithfulness from phonology, which also allows us to capture the interesting parallel noted in Rood and Legendre 1992 between the fact that palatization is blocked in stative (unaccusative) verbs and the use of the active series (true agreement) is also blocked with stative verbs.

Theoretical and typological considerations beyond the scope of this paper will enter into the which approach if any is right for Lakota. What this paper has tried to show is that, despite the active-stative pattern that cross-referencing takes in Lakota, the cross-referencing forms themselves appear to be drawn from the standard inventory of cross-referencing forms found around the world: true agreement and syntactic clitics.
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