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ACTIVE-STATIVE AGREEMENT IN CHOCTAW AND LAKOTA

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ABSTRACT: A new analysis of active-stative agreement, focusing on Choctaw and Lakota, formally captures the notion that these are split agreement systems. Ordinary subject agreement (T agreement) is split, in that it is restricted to external arguments, while pronominal clitics cross-reference internal arguments. Although syntax is crucially involved, limiting the range of T agreement, the main action is at the syntax/PF interface where constraints on morphological spell-out interleaved with phonological constraints (as in Wolf 2008) determine whether T agreement or a pronominal clitic will be used to cross-reference a nominative argument. Previous approaches posit an unmotivated abstract case system wherein all unaccusative subjects get accusative case, or unnecessarily enrich the theory with a type of agreement that directly targets argument structure categories, predicting types of mixed agreement patterns that do not occur.
KEYWORDS: split intransitive; semantic alignment; morpheme order; person alignment; constraints on spell-out; syntax/PF interface; Harmonic Serialism.

INTRODUCTION

In an active-stative agreement pattern, intransitive subjects are cross-referenced like objects when the verb is from the 'stative' class, but like transitive subjects when the verb is from the 'active' class (e.g. Dixon 1979, 1994, Mithun 1991, Wichmann 2008).[2] Choctaw is a prototypic example in the view of Dahlstrom 1983. The active transitive pattern is shown in (1) where the subject is cross-referenced with a form from *Series I* (using the neutral labels of Munro and Gordon 1982), while the object is cross-referenced with *Series II*. The intransitive pattern for verbs in the active class is shown in (2) where the subject is cross-referenced with Series I. The intransitive pattern

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[2] Active-stative agreement goes by several names in the literature, including active, agent-patient, split intransitive, split S and semantic alignment. See a recent overview of issues and approaches to active-stative agreement in Donohue and Wichmann 2008.

for verbs in the stative class is shown in (3) where the subject is cross-referenced with Series II , the same series that is also used to cross-reference the object in (1):

(1) **Chi**- ahpali -**li** -h.
2nd sgSeriesII kiss **1st sgSeriesI**-TENSE
'I kissed you. (Broadwell 1987:47)

(2) Balili -**li** -h.
run **1st sgSeriesI**-TENSE
'I ran.' (Broadwell 1987:47)

(3) **Chi**- kayyah.
2nd sgSeries II pregnant
'You are pregnant.' (Broadwell 1987:47)

The 'active' class has been identified as those verbs that take an external argument (deep subject or initial 1 in other frameworks); while the 'stative' class consists of verbs that do not (e.g. Williamson 1979, 1984, Van Valin 1885, Legendre and Rood 1992, Boyle 2000).[3] But merely identifying these verb classes is only the first step in understanding active-stative agreement. We need to know what the two cross-referencing series are, and how they come to be correlated with argument structure categories. Proposals in the literature to answer these questions fall into two groups. One assumes a strictly case-based approach to agreement, and hypothesizes an abstract case system for these languages wherein verbs in the stative class assign accusative case to their subjects (e.g. Jelinek 1989, Shütze 1995, Williamson 1984). The problem with that approach is that such a case pattern has no independent motivation; it does not occur among languages that mark their arguments with morphological case. The second type of approach in the literature adds a new type of agreement to the theory, one that directly targets external and internal arguments (or the equivalent initial grammatical relations) (e.g.Williamson 1979, Van Valin 1985, Legendre and Rood 1992, Boyle 2000). I will argue that adding a new type of agreement to the theory is unnecessary, and typologically undesirable in that it causes the theory to overgenerate, predicting mixed agreement patterns that do not occur.

[3] It is known that the exact membership of these verb classes differs somewhat cross-linguistically, and there is much literature focused on identifying the semantic factors that determine these verb classes, which also play a role in auxiliary selection (e.g. Van Valin 1990, Mithun 1991, Sorace 2000, Legendre 2007). Choctaw also has auxiliary selection, and that selection is based on the same verb classes that determine the choice of cross-referencing form (Broadwell 2006). See Legendre 2007 for an OT approach to the problem of capturing cross-linguistic differences in the semantic factors that determine what range of arguments will be mapped to the external argument category.

A different approach is proposed here which formalizes the idea that active-stative agreement systems are split agreement systems.[4] A split, in the typological literature, refers to a situation in which the normal/full distribution an element is restricted to a subset of that distribution in some language. For example, ergative case is said to be split in Dyirbal in that it is restricted to third person. The proposal here is that the series which cross-references external arguments in active-stative systems is ordinary subject agreement (T agreement) whose normal distribution (all nominative arguments) is split, in that it is restricted to cross-referencing only external arguments. The series that cross-references other arguments consists of pronominal clitics (often called incorporated pronouns or pronominal arguments) which are not morphologically distinguished by case. [5] I present evidence from Lakota that the split agreement pattern is produced by constraints on morphological spell-out at PF, which are interleaved with phonological constraints, as in Wolf 2008. Phonology plays a role both in the linear order of these forms, as well as the choice of whether to spell out T agreement or a (nominative) clitic to cross-reference a subject.

This paper is organized as follows. The data and analysis of the active-stative agreement pattern in Choctaw in presented in section 2. Supporting evidence for an OT approach involving the syntax/PF interface comes from details of the agreement pattern of Lakota presented in section 3. Section 4 is a discussion of the theoretical and typological implications of this approach, and a comparison with the predictions of previous approaches to active-stative agreement.

1. CHOCTAW

In Choctaw, case is morphologically marked on arguments and the system is nominative-accusative (Broadwell 2006).

(4) John-at tákkon(-a) chopa-h.
John-NOM peach(-ACC) bought-TENSE
'John bought a peach.' (Broadwell 2006:39)

Accusative case need not be spelled-out morphologically when the object is adjacent to the verb,

[4] Pustet 2002 emphasizes that the active-stative split in agreement in languages such as Lakota is only one of a range of kinds of splits in how intransitive subjects agree. She mentions, for example, Yucatec Maya where the split is based on aspect. I have analyzed that aspect split in the context of a proposed general approach to aspect splits in Woolford 2008).

[5] I use the term pronominal clitic in a broad sense to include both types defined by Marantz 1988, including head clitics (often called incorporated pronouns) as well as the type of pronominal clitic familiar from Romance languages,

but it must be morphologically overt on an object that is not adjacent to the verb. For example, in ditransitive constructions (which are double accusative constructions as in English), the accusative case of the first object must be morphologically spelled-out, although the accusative case of the second object, which is adjacent to the verb, need not be:

(5) Hattak-at alla-yã towa(-yã) ĩ-pila-tok.
man-NOM child-ACC ball(-ACC) APPL-throw-past
'The man threw the child the ball.' (Davies 1986:7, reglossed[6])

Accusative case must also be spelled-out on a fronted object (Broadwell 2006: 74), as in the following example:

(6) Tákkon-a John-at chopa-h.
peach-ACC John-NOM buy-TENSE
'John bought a peach.' (Broadwell 2006:39)

Free pronouns are also marked for nominative and accusative Case in Choctaw, although pronouns normally drop (are not spelled out morphologically). Focused pronouns are overt and they take a contrastive focus marker that can also express Case (Broadwell 2006:93).

(7) An-akoosh nípi' chopa-li-tok.
I-CONTR:NOM meat buy-1st sg SERIES I-PAST
'I (not someone else) bought the meat.' (Broadwell 2006:93)

As with non-pronominal arguments, accusative case need not be morphologically spelled out on an object pronoun that is adjacent to the verb (Broadwell 2006):

(8) An-o is-sa-hottopali-tok
I/Me-CONTR 2nd SG-1st SG-hurt -PAST
'You hurt me.' (Davies 1986:2)

In this paper, we focus on the fact that there appears to be a mismatch between the case and agreement patterns in Choctaw, a fact that is theoretically interesting because it presents a challenge to strictly case-based approaches to agreement.

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which Marantz terms phrasal clitics.

[6] Davies 1986 glosses the *yã* case as oblique; I follow Broadwell 2006 in identifying it as accusative. Davies glosses the *ĩ* attached to the root in (5) as 3rd dative; I follow Broadwell 2006 who argues that there are no third person cross-referencing forms in Choctaw, and this is a bare applicative morpheme.

1.1 ACTIVE-STATIVE AGREEMENT IN CHOCTAW

Choctaw is described by Munro and Gordon 1982 as having three series of cross-referencing morphemes, which they label neutrally as Series I, II, and III. However, Broadwell (2006) establishes that Series III forms are not actually distinct from Series II forms; instead, Series III forms are Series II forms attached to an applicative morpheme. There are no third person cross-referencing forms in Choctaw, and the overt form that we see in Series III is the applicative morpheme.

(9) Cross-referencing Forms in Choctaw

		Series I	Series II	Series III [=Series II+applicative]
1st	sg	li	sa/si	(s)am
	pl	il	pi	pim
2nd	sg	is(h)	chi	chim
	pl	has(h)	hachi	hachim
3rd	sg	--	--	im [applicative alone]
	pl	--	--	im [applicative alone]

The order of these cross-referencing series in the verbal complex is shown in (10).

(10) Series I+NEG+Series II/III+verb+Series I(1st sg only)+Tense

Series I forms precede Series II forms in the verb complex, with one exception: the first person singular form in Series I,–*li*, suffixes to the verb, preceding Tense, as in (11). This contrasts with the position of all other Series I forms which occur at the left edge of the verbal complex, as in the example in (12):

(11) Hilha -**li** -tok.
dance -**1sgSeriesI** -PAST
'I danced.' (Davies 1986:14)

(12) **Ish-** hilha -h.[7]

2sgSeriesI- dance -PRED

'You dance.' (Ulrich 1986:2)

Despite the difference in position, these are analyzed as elements from the same series, Series I, which are spelled-out in different positions (Nicklas 1974, Heath 1977, Munro and Gordon 1982, Davies 1986 and Schütze 1995). In the negative, all Series I forms, including first singular, occur at the left edge of the verbal complex:[8]

(13) **Ak-** íiy -o -kii -ttook.

1SGSERIESI.N go NEG-NEG -DISTPAST

'I didn't go.' (Broadwell 2006:149)

Series I cross-references only subjects of verbs in the 'active' class, while Series II/III forms cross-reference subjects of verbs in the 'stative' class, all objects, and all possessors (Nicklas 1974, Heath 1977, Munro and Gordon 1982, Davies 1986, Broadwell 2006). Examples with an active verb, where Series I cross-references the subject include (1) and (2) above, and (14) to (17) below:

(14) Wakaay-a **-li** -h.

rise-intr **-1st sgSeriesI**-TENSE

'I stood up.' (Broadwell 2006:126)

(15) Nowa **-li** -h

walk **-1st sgSeriesI**-TENSE

'I walked.' (Broadwell 2006:128)

(16) Chi- písa **-li** -h.

2nd sgSeriesII- see **-1st sgSeriesI**-TENSE

'I see you.' (Broadwell 2006:23)

(17) **Is**- sam- anooli -tok.

2nd sgSeriesI- 1st sgSeriesIII- tell - TENSE

'You told me.' (Broadwell 2006:139)

Examples of verbs in the 'stative' class, whose subjects are cross-referenced with Series II are shown in (3) above, and in the examples in (18) and (19):

[7] The *h* morpheme in the tense slot is analyzed in Broadwell 2006:172 as a default tense morpheme.

[8] Broadwell (2006:148) labels the form of Series I that occurs in the negative as N forms. Although these appear to be a Series I form fused to a negative morpheme *ik*, these same forms are also used in positive hortatives. Negative verbs are marked by a negative suffix *o(k)*, optionally followed by *–kii* (Broadwell 2006:49).

(18) **Sa-** habishko.
1st sgSeriesII- sneeze
'I sneezed' (Broadwell 1987 (3))

(19) Ik- **sa-** niya -h.
NEG- **1st sgSeriesII** -fat -TENSE
'I'm not fat.' (Broadwell 2006:149)

Although active-stative agreement is sometimes referred to as a split intransitive system, this split is not entirely restricted to intransitives. There are a small number of transitive verbs in the stative class.[9] The subjects of these verbs are cross-referenced with the Series II/III, as are their objects:

(20) Chi- sa- banna -h.
2nd sgSeriesII **1st sgSeriesII** believe -TENSE
'I want you.' (Broadwell 2006:153)

(21) Chi- sa- yimmi -h.
2nd sgSeriesII **1st sgSeriesII** believe -PRED
'I believe you.' (Davies 1986:77)

(22) Sa- chi- anokfohka -h -õ.
1st sgSeriesII **2nd sgSeriesII** understand -PRED -Q
'Do you understand me?' (Davies 1986:78)

The above examples are not ambiguous; a Series II/III form that cross-references the subject is always closer to the verb than is the form that cross-references the object (Broadwell 2006).

1.2 SERIES I: T AGREEMENT

In the analysis proposed here, Series I is ordinary T agreement (often called subject agreement) which is associated with T and nominative case in many languages). It is not obvious that Series I is ordinary subject agreement in Choctaw because it is split; its distribution is restricted so that it can only cross-reference those nominative arguments that are also external arguments.[10] Given

[9] According to Broadwell 2006:145, there is considerable speaker variation in which verbs allow the pattern with two Series II cross-referencing forms. Davies 1986 lists four verbs that can, 'to doubt', 'to understand', 'to want', and 'to believe', but not all of the speakers that Broadwell consulted allow this pattern with all of these verbs.

[10] As discussed in the introduction to this paper, I take the position that what distinguishes the 'active' and 'stative' verb classes in Choctaw is whether or not the verb takes an external argument. Like noun/gender classes in other languages, verb classes are not entirely predictable from semantic features, however Broadwell 2006 states that "with the notable exception of the quantifiers, the semantic classes associated with [Series] I agreement are all clearly

that splits are known to exist, this is a more conservative and restrictive hypothesis than one that adds a new kind of agreement to the theory. (See the discussion of typological predictions in section 3).

One argument for identifying Series I forms as T agreement is that this series behaves like T agreement in English in negative clauses. We saw above that Series I forms appear in two different positions within the verbal complex in Choctaw. English also has two different positions in which T agreement is realized: one is suffixed to the main verb, and the other is on an auxiliary preceding the verb, which is presumably in T (Infl in older work). As is well-known, the features of T agreement reside on T, but they are realized as a suffix on the verb in English if T is empty and no negative intervenes between T and the verb. The important similarity between Choctaw and English is that *T agreement cannot be suffixed to the verb when a negative is present*. The relevant contrast between the positive and negative in English is shown in (23) and in Choctaw in (24) and (25):

(23) a. He run+s.

b *He not run+**s** .

c. He do+es not run. or He doesn't run.

(24) iya-**li** -ttook.

go -**1SG.SERIES I** -DISTPAST

'I went.'

(25) **Ak-** íiy -o -kii -ttook.

1SG. SERIES I.N go NEG-NEG -DISTPAST

'I didn't go.' (Broadwell 2006:149)

In both languages, the presence of a negative blocks T (labeled I in older work) from checking agreement features suffixed to the verb. Thus, in the presence of a negative, the only choice is to spell-out T agreement features on T itself, rather than suffixed to the verb. This parallel behavior suggests that the leftmost Series I 'slot' in Choctaw is T, while the Series I position suffixed to the verb in Choctaw corresponds to T agreement suffixed to the verb in English. Additional evidence consistent with this conclusion is that suffixed position is in the phonological domain of the verb in Choctaw, by the evidence that it is subject to the phonological process of rhythmic lengthening that apply to the Choctaw verb (Broadwell and Martin 1993). The prefixed Series I position is outside the phonological domain of the verb, by that same criterion (Broadwell and

agentive and volitional." "Statives predominate among the verbs taking [Series] II agreement."

Martin 1993).[11]

Another indication that the initial slot in the verbal complex in Choctaw corresponds to T is shown in the next section, based on a parallel with Bantu.

1.3 SERIES II/III: PRONOMINAL CLITICS

Series II/III forms in Choctaw behave like pronominal clitics in other languages, if we use this label in the broad sense of Marantz (1988:263) to include not only the familiar Romance type of pronominal clitics, as in (26), but also the Bantu type of cross-referencing form which occurs inside phonological words, as in (27), which are sometimes referred to in the literature as incorporated pronouns.

(26) Maria me lo spedisce. [Italian]
Maria 1st DAT.CL 3rd ACC.CL sends.3rd AGR
'Maria sends it to me.'

(27) A- ka- ga- mu- m- pé -er -a. [Runyambo]
AGR-TNS - 3rd CL- 3rd HUMAN.CL 1st CL give -APPL -MOOD
'She gave it to him for me.' (Rugemalira 1993 (8))

The placement of Series II/III forms in Choctaw is similar to the placement of pronominal clitics in Romance and Bantu languages in that they cluster in a spot preceding the verb. In Runyambo and many other Bantu languages, the clitic cluster is inside the verbal complex, attached to the left edge of the verb stem, as in Choctaw.

(28) Agreement+Tense+CL+CL+CL+verb [Bantu]

In Bantu, T agreement occurs at the left edge of the verbal complex, followed by tense and then any pronominal clitics immediately precede the verb stem When we compare this to the order of cross-referencing forms in Choctaw, we see that Choctaw is like Bantu languages in placing T agreement at the left edge of the verbal complex, while pronominal clitics cluster at the left edge of the verb stem:

(29) Agreement+Neg+CL+CL+verb [Choctaw]

The position of the first person singular T agreement in Choctaw that is suffixed to the verb corresponds to the position of agreement in the Italian example in (26) above, which is also

[11] What remains unexplained under this account is why the distant past morpheme can be spelled out suffixed to the verb in the negative in Choctaw. One possibility is that it is actually an aspect morpheme.

suffixed to the verb.

Choctaw differs from Bantu and Romance languages in its clitic cluster can contain a clitic that cross-references a nominative subject (in stative verbs). I argue in the next section that there is a preference in Choctaw for using a pronominal clitic whenever possible, whereas most Bantu and Romance languages use T agreement whenever possible. Pronominal clitics can potentially be used to cross-reference an argument with any case, including nominative, as we see in the next section. [12]

1.4 T AGREEMENT AND PRONOMINAL CLITICS IN SYNTAX

In the account proposed here, active-stative agreement patterns do not emerge until PF/spell-out. In the syntax of languages with active-stative agreement, T agreement and pronominal clitics are freely generated. That is, T agreement cross-references the nominative subject of every clause, and pronominal clitics cross-reference all arguments, with the result that nominative subjects are doubly cross-referenced in syntax. However, in syntax, these cross-referencing elements consist only of feature bundles, and the choice of which to spell-out (by inserting an actual morpheme) is not made until PF. Since double cross-referencing is redundant, most languages do not spell out both T agreement and a nominative pronominal clitic, but this can occur if it is not entirely redundant. For example, in Kashmiri (Wali and Koul 1997) both are spelled out because neither is able to cross-reference all of the features (person, number, and gender) of the nominative argument. In Kashmiri, T agreement cross-references gender and number, but not person, while pronominal clitics cross-references person and number, but not gender. Thus to cross-reference all three features of a nominative argument, both T agreement and a pronominal clitic must be spelled out. We see this in the following example where the subject pronoun, *BI*' (1st, sg, masc.) is cross-referenced by T agreement (masc. sg.) and by a 1st person singular pronominal clitic:

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

If a language always spells out T agreement and never pronominal clitics, the result is the familiar

[12] Choctaw is like Italian in that it does not morphologically distinguish its first and second person pronominal clitics by case. (See Grimshaw 2001 for a discussion of Italian clitics.). We cannot tell if third person pronominal clitics would be morphologically distinguished by case in Choctaw because no third person pronominal clitics are spelled out.

'nominative-accusative' agreement pattern. However, I have argued in previous work (Woolford 2003, 2008) that the choice of which cross-referencing form to use for nominative arguments is manipulated in some languages to produce some rather more interesting agreement patterns involving splits based on factors such as person, and aspect. I argue here that the choice between using T agreement or a pronominal clitic to cross-reference nominatives is also the key to understanding active-stative agreement patterns. In the next section, the formal account of exactly how the distinction between external and internal determines this choice.

1.5 CONTEXTUALLY RESTRICTED CONSTRAINTS ON SPELL-OUT

To restrict a cross-referencing form to a particular context, we need a type of violable constraint that is well-known in work on phonology in Optimality Theory: contextually restricted constraints. A contextually restricted markedness constraint prohibits a marked feature from being realized in combination with another marked feature.

(31) Contextually restricted markedness constraint:

*[+X]/[+Y] Prohibit [+X] when it occurs in combination with [+Y]

Contextually restricted markedness constraints can affect morphological spell-out; this can be illustrated with an example from English. Gender distinctions are spelled out on English pronouns only in the third person (he, she, it), but not in first or second person. This is produced by a contextually restricted markedness constraint operating on spell-out at PF. To illustrate this using a single constraint, we can use the feature [+local] to stand for a feature that first and second person share but which is not shared by third person elements:

(32) *GENDER/[+LOCAL] Do not spell out gender on a $1^{st}/2^{nd}$ person form.

I propose that a similar constraint restricting the spell out of pronominal clitics produces the active-stative pattern. The restricting environment must be a marked feature. I assume that external arguments are more marked than internal arguments. I will use the feature [+ext] to stand for whatever the feature is that little v imparts when licensing an external argument in syntax. [13] This feature [+ext] is present on any pronominal clitic that cross-references an external argument. [14] Under these assumptions, the key constraint that produces an active-stative pattern is

[13] The exact identity of this feature is not crucial here, a long as it is present on external arguments (subjects of verbs in the 'active' class in Choctaw) in syntax, but not present on internal arguments.

[14] Since pronominal clitics are pronominal in some sense, it seems reasonable that they can carry such a feature. However, under this approach, it is not necessary to assume that the feature [+ext] is present on T agreement when it

shown in (33). It prohibits the spell out of a pronominal clitic (pcl) that carries the feature [+ext]:

(33) *PCL/[+EXT] Do not spell out a pronominal clitic with the feature [+ext]

The constraint in (33) confines pronominal clitics (Series II/III in Choctaw) to cross-referencing internal arguments in the surface pattern. It blocks pronominal clitics from cross-referencing external arguments, thus leaving T agreement (Series I in Choctaw) as the only choice of a cross-referencing form for an external argument.

There is no corresponding constraint restricting T agreement to cross-referencing only external arguments. I argue that such a constraint is neither necessary nor desirable. [15] Instead, I argue that this restriction is a derived effect, which follows from independently motivated constraints restricting double cross-referencing in general, and from the constraint ranking that sets the preference in each language for using T agreement versus pronominal clitics as the preferred form of cross-referencing.

I have argued in previous work (Woolford 2003) that languages differ as to whether they prefer to use T agreement or a pronominal clitic when either would be possible. In familiar languages such as Spanish, T agreement is preferred over nominative pronominal clitics. However, the preference is reversed in languages such as Selayarese, where pronominal clitics are favored, and T agreement is used only as a 'last resort'.[16] In Optimality Theory (unlike MP), one cannot simply assert that T agreement is a 'last resort' device; moreover, this would be too crude to produce the pattern of Choctaw. Instead, the basic preference in a language for T agreement or pronominal clitics is determined by the relative ranking of the independently motivated markedness constraints, *pclitic and *agreement, which prohibit each of these cross-referencing forms. If *pclitic is ranked higher than *agreement, agreement is preferred and pronominal clitics are in effect 'last resort'. The opposite ranking produces the opposite preference:

(34) *PCLITIC >> *AGREEMENT

(Pronominal clitics are 'last resort' in the language, agreement is preferred.)

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cross-references an external argument. As we will see below, the surface split in T agreement in active-stative languages is a derived 'elsewhere' effect under this proposal.

[15] Such a constraint (*Tagr/[ext]) would have an unmarked feature as its context ([-ext]), which is not allowed in the restrictive version of Optimality Theory that I assume here. Moreover, allowing such a constraint in the theory has undesirable consequences in terms of restrictiveness, predicting kinds of agreement systems that do not appear to occur. This is discussed below in section 3.

[16] Selayarese limits pronominal clitics to one per clause. As a result, despite the fact that pronominal clitics are the preferred cross-referencing device, T agreement must also be used whenever there are two arguments to be cross-referenced in a clause (Woolford 2003).

(35) *AGREEMENT >> *PCLITIC

(Agreement is 'last resort' in the language, pronominal clitics are preferred)

To make T agreement 'last resort' in Choctaw with respect to pronominal clitics, we use the ranking in (35). To capture the fact that T agreement is nevertheless used to cross-reference external arguments, we rank the contextually restricted markedness constraint in (33) higher than *AGREEMENT. The Choctaw ranking is thus as in (36):

(36) *PCL/[+EXT] >>*AGREEMENT >> *PCLITIC

This constraint ranking will block the spell out of pronominal clitics that cross-reference external arguments, but will otherwise block the spell-out of T agreement.

Thus far, the constraints in (36) are all ones that block the spell out of cross-referencing forms. These markedness constraints are opposed by a faithfulness constraint that requires the preservation (spell-out) of first and second person features.

(37) MAX (+LOCAL) A local feature in the input (syntax) must be present in the output (PF).

This faithfulness constraint will force a cross-referencing form with first or second person to be spelled out, if it is ranked above the markedness constraints against spelling out agreement and pronominal clitics:

(38) MAX (+LOCAL) >> *PCL/[+EXT] >> *AGREEMENT >>. *PCLITIC

However, nothing requires the spell out of third person features in Choctaw, and thus we see no third person cross-referencing forms on the surface.

To see how these constraints, in this ranking, produce the cross-referencing pattern Choctaw, let us begin with what happens with an intransitive verb with a first person external argument. In the input from syntax, both a first person pronominal clitic and T agreement with a first person feature are present. The competing candidates for the output/PF spell-out pattern in the tableau in (39) include (a) where both the clitic and agreement is spelled out, (b) and (c) where only of these is spelled out, and (d) where neither is spelled out:

(39) Intransitive with a first person external argument

input: pcl(+ext,1st), Tagr(+ext,1st)	MAX ([+LOCAL])	*PCL/[+EXT]	*AGREE	*PCL
a. pcl(+ext,1st), Tagr(+ext,1st)		*!	*	*
b. pcl(+ext,1st)		*!		*
→c. Tagr(+ext,1st)			*	
d.	*!			

The (d) candidate (where no cross-referencing form is spelled out) is eliminated first, because the

first person feature is not preserved/spelled out, violating MAX ([+LOCAL]).[17] Next, the contextually restricted markedness constraint *PCL/[+EXT] removes candidates (a) and (b), because both have a pronominal clitic with the feature [+ext]. This leaves candidate (c), with just T agreement, as the winner (indicated here by →). This is the correct prediction, as we see in the example in (40).

(40) Taloowa -**li** -tok.
sing -**1st Tagr**-past
'I sang.' (Broadwell 2006:17)

Let's contrast this with what happens with an intransitive whose subject is an internal argument. In the tableau in (41), the (d) candidate is again eliminated by MAX ([+LOCAL]) because it fails to spell out the first person feature. Now, the next constraint, *PCL/[+EXT], has no effect since there is no external argument. We thus pass down to *AGREE, which eliminates candidates (a) and (c) because they spell-out an agreement morpheme. This leaves candidate (b) with just a clitic as the winner.

(41) Intransitive with a first person internal argument

input: pcl(1st), Tagr(1st)	MAX ([+LOCAL])	*PCL/[+EXT]	*AGREE	*PCL
a. pcl(1st), Tagr(1st)			*!	*
→b. pcl(1st)				*
c. Tagr(1st)			*!	
d.	*!			

This is the right result, as we see in example (42):

(42) **Sa**- niya-h.
1st sgSeriesII-fat -tense
'I am fat.' (Broadwell 2006:33)

When the subject is third person, the situation changes. The MAX ([+LOCAL]) constraint does not rule out the (d) candidate, where no cross-referencing form is spelled out. Since (d) violates no other constraint in this tableau, but all the other candidates do, (d) wins the competition. The tableau below shows the competition with respect to a third person subject that is an internal argument, which will not violate *PCL/[+EXT]. Here the markedness constraint

[17] I assume here that when an argument is doubly cross-referenced in syntax (by T agreement and a pronominal clitic), the features on these two cross-referencing forms are both in correspondence with the features of the argument, so that spelling out a first person feature once (on one cross-referencing form or the other) is sufficient to satisfy the MAX ([+LOCAL]) constraint. Thus the (b) and (c) candidates in tableau (39) do not incur violations of MAX ([+LOCAL]).

*AGREE rules out any candidate where T agreement is present, (a) and (c), while the markedness constraint against pronominal clitics, *PCL, rules out (b) (and redundantly rules out (a)):

(43) Third person subject

input: pcl(3rd)), Tagr(3rd))	MAX ([+LOCAL])	*PCL/[+EXT]	*AGREE	*PCL
a. pcl(3rd)), Tagr(3rd))			*!	*
b. pcl(3rd))				*!
c. Tagr(3rd)			*!	
→d.				

This is the correct result, as we see in example (44) where there is only a verb and a tense morpheme, and no cross-referencing element is spelled out:

(44) Niya -h.
fat -tense
'S/he is fat.' (Broadwell 2006:32]

Transitive examples work in the same way with respect to subject cross-referencing. With respect to object cross-referencing, this approach predicts that internal arguments will be cross-referenced with a pronominal clitic (even if there is some kind of object agreement present in syntax in Choctaw), because pronominal clitics are the favored cross-referencing device in Choctaw. The tableau below shows why object agreement would lose the object cross-referencing competition at spell-out. The (d) candidate with no cross-referencing element is eliminated by MAX ([+LOCAL]) because it fails to spell out the first person feature of the object. Since the object is not an external argument, the contextually restricted constraint *PCL/[+EXT] has no effect, and we thus consult the next lower constraint. *AGREE eliminates candidates (a) and (c) because they have an agreement morpheme. This leaves candidate (b) with just a pronominal clitic cross-referencing the object as the winner:

(45) 1st person object

input: pcl(1st), agr(1st)	MAX ([+LOCAL])	*PCL/[+EXT]	*AGREE	*PCL
a. pcl(1st), agr(1st)			*!	*
→b. pcl(1st)				*
c. agr(1st)			*!	
d.	*!			

This is the correct result as we see in example (46). (This example has a third person subject,

which is not overtly cross-referenced):

(46) Ik- **sa**- píis -o -tok.
neg **1st sgSeriesII** see -neg -past
'She/he didn't see me.' (Broadwell 2006:152)

The general preference for using pronominal clitics in Choctaw (except for external arguments) expressed in the above constraint ranking also predicts that possessors inside DPs will be cross-referenced with a pronominal clitic (Series II/III), and this prediction is also correct:

(47) **Sa**- shki'
1st sgSeriesII- mother
'my mother' (Broadwell 2006:53)

(48) **chi**- bishákni'
2nd sgSeriesII- nose
'your nose' (Broadwell 2006:57)

If there is a form of agreement with possessors present in the DP in syntax, the competition between this and the pronominal clitic would be governed much as in the tableau above in (45).

To summarize, Choctaw is set up, via its constraint ranking, to spell-out a cross-referencing form for all first and second person arguments, and to use pronominal clitics for everything except an external argument. This is how the surface active-stative pattern is produced. In the next section, we will see how this approach extends to Lakota, where the clean pattern we see in Choctaw is slightly disturbed by person and number alignment requirements.

2. LAKOTA

Lakota is another well known example of a language with active-stative agreement (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 Legendre and Rood (1992:380), where the subject of the stative verb 'be sleepy' in (49) is cross-referenced like the object of the transitive verb 'kill' in (50). In contrast, the subject of the intransitive active verb 'jump' in (51) is cross-referenced with the same series that is used for active transitive verbs.

(49) **Ma**- xwa.
1st STATIVE be.sleepy'
'I am sleepy.'

(50) **Ma**- ya- kte.
1st STATIVE- 2nd ACTIVE kill
'You kill me.'

(51) **Wa**- psiča.
1st ACTIVE- jump
'I jumped.' (Legendre and Rood 1992:380)

The literature on how to analyze the active-stative agreement pattern in Lakota is divided, just as the literature on Choctaw is. One approach shifts the problem onto the case system by postulating an abstract case pattern where stative subjects get accusative case (e.g. Williamson 1984). Opposing approaches postulate that the agreement pattern is independent of case, and that the two cross-referencing series mark something else, such as initial grammatical relations or protoroles (e.g.Williamson 1979, Van Valin 1985, and Legendre and Rood 1992).[18] In the analysis proposed here, which is essentially the same as that proposed above for Choctaw, both positions are partially correct: the Lakota system is a split agreement system which is based partially on case and partially on the initial grammatical relations encoded in syntax, external and internal argument positions.

I argue in this section that the identification of these two cross-referencing series is the same as in Choctaw: T agreement cross-references the subject of verbs in the active class, while pronominal clitics cross-reference everything else. Case is not morphologically marked on arguments in Lakota, but it is most likely a nominative-accusative system as in Choctaw. Pronominal clitics are not morphologically distinguished for case in Lakota, and can thus potentially be used to cross-reference any argument, as in Choctaw. In the formal analysis presented below, there is a preference for using pronominal clitics, if possible, with T agreement used as a 'last resort' when the constraint ranking bars pronominal clitics. However, the analysis is a bit more complex in Lakota than in Choctaw because high ranking person alignment and phonological constraints add some wrinkles to the plain split agreement pattern that we saw above in Choctaw. In fact, these constraints can force the use of a pronominal clitic to cross-reference an

[18] 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.

external argument under certain conditions, deviating from the basic active-stative pattern.

This section begins with presentation of the data and generalizations of Lakota agreement that need to be accounted for, followed by a formal account of these within Optimality Theory.

2.1 T AGREEMENT IN LAKOTA

The forms that cross-reference subjects of verbs in the active class of Lakota are listed below. Note that as in Choctaw, there are no third person forms:

(52) Active Series Cross-Referencing Forms in Lakota (major conjugation)

1st sg	wa-
1st dual	ũ(k)
1st-2nd portmanteau form	čhi
2nd	ya-
3rd	∅

(53) Wa- psiča.[19]
1stsgAGR jumped
'I jumped.' (Legendre and Rood 1992:380)

(54) Ya- čheye.
2ndAGR cry
'You cry.' (Williamson 1979: 353)

(55) Ũ- čheye.
1stdualAGR cry
'We inclusive cry.' (Williamson 1979: 354)

(56) Čhi- kte.
1st-2ndPORTAGR kill
'I kill you.' (Boas and Deloria 1941:76)

The portmanteau agreement form, shown in (56), will be discussed below in section 2.4.2. We will see that person alignment plays a role in determining when a portmanteau agreement form is used. The reason has to do with the fact that person alignment constraints, in the technical sense from Optimality Theory (McCarthy and Prince 1993, Prince and Smolensky 1993, 2004), are violated when two forms are present which both have a local person feature (first or second person) because both cannot be perfectly aligned to the same edge. The solution is to

[19] I gloss the active series as T agreement, and the stative series as pronominal clitics in the Lakota examples.

simultaneously align them to the same edge by using one portmanteau form that encodes both features. Yet a portmanteau form is not always possible. In Lakota, portmanteau agreement formation is subject to a person restriction which is also found in several other languages, although it is not universal:

(57) Person Restriction on Portmanteau Agreement Formation:[20]

> In a portmanteau agreement 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. Below I will argue that a portmanteau agreement form is used in Lakota whenever it is both needed, if it is possible given these constraints.

Like T agreement in many other languages, this Lakota series can cross-reference only subjects/nominatives (except for the portmanteau form which cross-references both the subject and the object simultaneously). However, as in Choctaw, this series is further limited to cross-referencing only the subjects of verbs in the active class, which I assume here are external arguments. This agreement series occurs in an absolutely fixed position preceding the verb:

(58) Ma- ya- kte.
1sgCL 2sgAGR kill
'You kill me.' (Shaw 1980:35, Legendre and Rood 1992:380)

Any pronominal clitics must precede the agreement.

2.2 PRONOMINAL CLITICS IN LAKOTA

The forms used to cross-references subjects of stative verbs in Lakota are listed in the table below from Rood and Taylor 1996:465).

(59) Cross-referencing forms for subjects of stative verbs

	Singular	Dual	Plural
1st	ma	ũ(k)	ũ(k) … pi
2nd	ni		ni … pi
3rd sg	∅		
3rd pl animate collective distributive			 wičha ∅ … pi

[20]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.

The same forms are used to cross-reference objects, with two neutralizations: the collective/distributive distinction is not made, and the dual/plural distinction is not made (Rood and Taylor 1996:466).

(60) Cross-referencing forms for objects (when subject is 3rd sg)

	Singular	Plural
1st	ma	ũ(k) … pi
2nd	ni	ni … pi
3rd sg	∅	
3rd pl animate		wičha

These cross-referencing forms are not morphologically marked for case in Lakota. The following pair of examples shows the first person singular form, *ma*, being used to cross-reference the subject of a stative verb in (61), which I assume has abstract nominative case, and the object of an active verb in (62), which I assume has abstract accusative case. (Case is not morphologically marked in Lakota, in contrast to Choctaw.) The example in (62) also illustrates the lack of a third person singular form:

(61) Ma- ištime. (pronounced mištíme) [stative verb]
1st sg.CL sleep
'I sleep.' (Legendre and Rood 1992:387)

(62) Ma- kte.
1st sg.CL kill
'He kills me.' (Williamson 1984:84)

Similarly, the second person form *ni* is used to cross-reference the subject of the stative verb in (63) and the object in (64):

(63) Ni- t'e. [stative verb]
2nd CL die
'You die.' (Williamson 1984:84)

(64) Ni- kte.
2nd CL kill
'He kills you.' (Williamson 1984:84)

Number can be marked with a *–pi* morpheme that follows the verb, as in (65), and there is a

special form *wičha* for 3rd plural animate collective, shown in (66): [21]

(65) Hąska pi.
tall plural
'They are tall.' (distributive) (Rood and Taylor 1996: 465)

(66) Wičha- hąske.
3rdpl.anim.CL tall
'They are tall.' (collective) (Rood and Taylor 1996: 465)

"There is no collective versus distributive distinction [for objects]: the collective affix of the stative paradigm is used for all animate plural objects (Rood and Taylor 1996:465)."

(67) Wičha- kte.
3rdpl.anim.CL kill
'He kills them. (Williamson 1984:84)

In the next section, we focus on the transitive verbs in the 'stative' class which can occur with two pronominal clitics, one cross-referencing the subject and one cross-referencing the object:[22]

(68) Iye- wičha- ma- čheča. [stative verb]
loc 3rdpl.anim.CL 1stsg.CL resemble
'I resemble them.' (Williamson 1979:360)

2.3 Linear Order of Cross-referencing Forms in Lakota

Pronominal clitics (the 'stative' series) precede T agreement (the 'active' series) within the verbal complex in Lakota, and nothing can alter this fixed order:[23]

(69) Rigid Order in Lakota verb: Pronominal clitics -T agreement- verb root[24]

[21] The first person form *ũ(k)* signals a dual when used without the postverbal plural *pi* morpheme, but the dual/plural distinction is only used with subjects. The k of this form is deleted when a consonant other than the glottal stop follows (Rood and Taylor 1996:464).

[22] 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.

[23] Boas and Deloria 1941:67 state that the cross-referencing forms in Lakota are ordered such that the object form precedes the subject form, with some exceptions. Similarly, Rood and Taylor 1996:467 state that "when two affixes are present, the usual order is first the object affix, then the subject affix," with exceptions which they list. Stating the order of cross-referencing forms in terms of grammatical relations results in an accurate description for most active verbs in Lakota because the subject is cross-referenced with T agreement (the 'active' series) while the object is cross-reference with a pronominal clitic (the 'stative' series) and the order of these elements is rigidly fixed. However, an ordering rule in terms of grammatical relations encounters many exceptions when it comes to transitive stative verbs, because grammatical relations are not relevant for order within a clitic cluster in Lakota.

[24] According to David Rood (personal communication) the historically correct statement for the location of these

The order within a cluster of pronominal clitics is partially determined by person in Lakota.[25] The preferred pattern of person alignment in Lakota aligns the higher person to the left edge of the verb root.[26]

(70) Preferred Person Order in Lakota 3^{rd} 2^{nd} 1^{st} verb root

However, person alignment is not always obeyed in Lakota. We will see in section 2.3.2 that phonological requirements can block person alignment.

2.3.1 PERSON ALIGNMENT IN LAKOTA

In this section, we see that person alignment is active in Lakota, determining the linear order of pronominal clitics within a clitic cluster, so that the higher person is closer to the left edge of the verb stem. This is a known phenomenon cross-linguistically, and the examples below demonstrate it in the Bantu language Haya (Duranti 1979). The example in (71) shows that a first person object clitic must be closer to the left edge of the verb root than a second person object clitic, as in (a), regardless of which cross-references the goal and which the theme. The opposite order in (b) is disallowed. The example in (72) shows that a second person clitic must occur closer to the left edge of the verb than a third person clitic. This is an interesting phenomenon from a communication standpoint because it creates ambiguity:

(71) a. A- ka- **ku-** **n-** deet -el -a. [Haya]
AGR TNS- **CL2nd** **CL**1st bring-appl-MOOD
'He brought me to you.' or 'He brought you to me.'

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

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cross-referencing prefixes is before the verb root, however, some verbs have discontinuous stems so that these cross-referencing forms are essentially infixed.

[25] This contrasts with Choctaw where subject clitics are always closer to the left edge of the verb stem than are object clitics, and neither person nor number play a role in ordering pronominal clitics within a clitic cluster.

[26] 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 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 her generalization it is designed to do is done better by the ordering principle that clitics precede T agreement. I argue that person alignment is active in Lakota, but that it makes use of only the standard person hierarchy.

(72) 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.'

b. *A-ka- **ku- mu-** deet-el-a.

CL2nd CL3rd (Duranti 1979:40)

(73) Person Hierarchy: 1^{st} > 2^{nd} > 3^{rd}

This same person alignment requirement orders pronominal clitics in Lakota and, as in Haya, it creates ambiguity; the relative order of two 'stative' cross-referencing forms is fixed, regardless of the meaning intended (Boas and Deloria 1941, Williamson 1979, Rood and Taylor 1996).[27]

(74) Iye- ni- ma- čheča.

loc 2^{nd}CL 1^{st}sgCL resemble

'I resemble you.' or 'You resemble me.'

(Williamson 1979:359, Legendre and Rood 1992:389)

(75) I- ni- ma- ta.

loc- 2^{nd} CL 1^{st}sg CL proud of

'I am proud of you.' or 'You are proud of me.'

(Williamson 1979:359, Legendre and Rood 1992:389)

(76) I- ni- ma- šteča.

loc 2^{nd}CL 1^{st}sg.CL ashamed of

'I am ashamed of you.' or 'You are ashamed of me.' (Williamson 1979:359)

However, person alignment *cannot* alter the fact that pronominal clitics precede T agreement in Lakota, as stated above in (69). Thus a second person form can be closer to the verb than a first person form if that second person form is T agreement, as shown in (77): [28]

[27] 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)."

[28] 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 (74) through (76). 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 both factors go into determining the order of cross-referencing morphemes in Lakota: their basic 'object-subject' pattern is the result of the clitic-Tagreement-verb root pattern established in syntax, while person alignment orders forms within a clitic cluster.

(77) Ma- ya- kte. [Lakota]
1sgCL 2sgAGR kill
'You kill me.' (Shaw 1980:35, Legendre and Rood 1992:380)

In the next section, we will see evidence that person alignment occurs at PF, in that it can be trumped by phonological constraints.

2.3.2 A PHONOLOGICAL EFFECT

The order of clitics within a clitic cluster that would be expected based on person alignment is not what actually occurs when one of the clitics is the *ũ(k)* 1st dual/plural form. It is well-known in the Lakota literature that this *ũ(k)* form has what Boas and Deloria 1941:76 call "peculiarities of position". These peculiarities are linked to the fact that this is the only vowel initial cross-referencing form in Lakota (McCarthy and Prince 1993). To see the effect of phonology on a clitic cluster, we need to look at a stative transitive example with two cross-referencing forms from the 'stative' series (pronominal clitics), the *ũ(k)* 1st dual/plural and the second person *ni*. The expected order of these pronominal clitics, based only on person alignment, would be as in (78), with the first person clitic closer to the verb root:

(78) Expected Order Under Person Alignment: ni - ũ(k) – verb root
2nd 1st

The order that actually occurs is the reverse of this, 1st – 2nd as we see in (79):

(79) Iye- ũ- ni- čheča pi.
loc 1st dual/plCL 2nd sgCL resemble plural
'We (pl.) resemble you.' (Ullrich, personal communication)

What causes this reversal? The reversal is related to the fact that the expected sequence, *ni - ũ(k)* has two adjacent vowels. There is independent evidence that the placement of *ũ(k)* can differ because it is VC instead of CV like the other cross-referencing forms. In example (79) *ũ(k)* precedes even the locative prefix:[29]

(80) Ũk- i- ni- šteča pi.
1plCL loc 2ndCL ashamed of plural
'We (pl.) are ashamed of you.' (Ullrich, personal communication)

[29] I would like to thank Willem de Reuse and Jan Ullrich whose combined efforts provided me with these examples. Ullrich elicited these forms from native speakers. (The 1st dual form is often ordered before the *i-* locative prefix, as in

McCarthy and Prince (1993) argue that the reason that *ũ(k)* can precede the locative prefix is because it reduces the number of onsetless (vowel initial) syllables in the word. The optional *k* of *ũ(k)* can serve as an onset for the locative prefix *i-* if *ũ(k)* precedes *i-*. If the order were the otherwise expected *i-ũ(k)*, there would be two vowel initial syllables instead of just one.

I postpone the formal account of the above effects until the next section, 2.4. To complete this section, I want to point out an important related fact: violations of the person hierarchy involving *ũ(k)* are not limited to stative verbs. The same thing occurs in active verbs. We see this in the contrast below. The normal pattern in an active transitive verb is shown in (81), where T agreement cross-references the external argument, and a pronominal clitic cross-references the object.

(81) Ma- ya- kaśka.'
1st CL 2nd TAGR- bind
'You bind me.' (Riggs 1893:30)

In 'we bind you', we do not find the T agreement form for 'we', *ũ(k)*, adjacent to the verb root; instead, the pattern that occurs is one in which *ũ(k)* precedes the object cross-referencing form *ni*. as in (82),.

(82) Ũ- ni- ćaśka pi.
1st pl 2nd bind pl
'We bind you.' (Riggs 1893:30)

Now, because the first person plural form looks alike in the two cross-referencing series, it might initially appear in the above example that T agreement and the pronominal clitic have switched places. Although I cannot entirely rule out that possibility, I will take a more restrictive approach here under which the position of T agreement is fixed, and what happens in this example is that the spell out of T agreement is blocked, and the nominative pronominal clitic (present in syntax) is spelled out at PF instead, even though it cross-references an external argument:

(83) feature bundles present in syntax: clitic-clitic-Tagreement
morphemes spelled out at PF in (82) clitic clitic

(84) Ũ- ni- ćaśka pi.
1st plCL 2nd CL bind pl
'We bind you.' (Riggs 1893:30)

If so, then this example is significant because it is an exception to the basic active-stative pattern:

(80), although Ullrich reports some speaker disagreement on this issue.)

its external argument is cross-referenced with a pronominal clitics (a form from the 'stative' series) instead of with T agreement (a form from the 'active' series).

Let us now turn to the formal analysis that captures these descriptive generalizations governing cross-referencing in Lakota.

2.4 THE FORMAL ANALYSIS OF CROSS-REFERENCING IN LAKOTA

The formal analysis proposed here to account for the active-stative pattern is the same as described for Choctaw in section 1. In syntax, each direct argument is cross-referenced with a pronominal clitic, and the subject is also cross-referenced with T agreement. In syntax, these cross-referencing forms consist only of feature bundles; at PF, ranked, violable constraints determine which of these feature bundles is spelled out by inserting a morpheme. As in Choctaw, the constraint that produces an active-stative pattern (if it is ranked high enough) blocks the spell-out of any pronominal clitic that cross-references an external argument:

(85) *pcl/[+ext] Do not spell out a pronominal clitic with the feature [+ext]

This constraint will produce an active-stative pattern in a language where pronominal clitics are otherwise the preferred mode of cross-referencing, captured by ranking the constraint against spelling out T agreement, *agree, above the constraint prohibiting pronominal clitics, *pclitic.

(86) *pcl/[+ext] >> *agree >> *pclitic

These constraints (which all block spell out) are dominated by a faithfulness constraint that demands that first and second person features be spelled out:

(87) MAX ([+LOCAL]) A local feature in the input (syntax) must be present in the output (PF)

The relative ranking of these constraints is the same as in Choctaw:

(88) MAX (+LOCAL) >> *pcl/[+ext] >> *agreement >> *pclitic

Now let us turn to the additional constraints that affect the cross-referencing pattern in Lakota, but not in Choctaw: person alignment and phonological constraints.

2.4.1 PERSON ALIGNMENT

The two person alignment constraints are shown in (89) and (90). The first requires a first person element to be aligned to the left edge of the verb root, while the second requires a local element

(first or second person) to be aligned to the left edge of the verb.[30]

(89) 1^{ST}[V ROOT] Align a first person element to the left edge of the verb root.

(90) LOCAL[V ROOT] Align a first or second person element to the left edge of the verb root.

There is no constraint aligning third person elements.[31] The local alignment constraint correctly orders a second and a third person clitic. In the tableau below, the local alignment constraint eliminates candidate (b) where a second person is not aligned to the left edge of the verb, leaving the (a) candidate which satisfies this constraint as the winner:

(91) Person Alignment (second and third)

input: two clitics-verb (clitics not yet linearized)	LOCAL[V ROOT]
→a. 3^{rd}CL-2^{nd}sgCL-verb	
b. 2^{nd}sgCL-3^{rd}CL-verb	*!

When a first and a second person form are involved, the candidates tie on the local person alignment constraint, and the first person alignment constraint makes the decision:

(92) Person Alignment (first and second)

input: two clitics, not yet linearized	LOCAL[V ROOT]	1^{ST}[V ROOT]
→a. 2^{nd}CL-1^{st}sgCL-verb	*!	
b. 1^{st}sgCL-2^{nd}CL-verb	*!	*!

We cannot actually tell how these two person alignment constraints are ranked with respect to each other since the two candidates tie with respect to the local version. If the local version is ranked higher, the decision will merely pass down to the first person version of the alignment constraint, which eliminates the (b) candidate where a first person is not aligned to the left edge of the verb. This is the right result for examples involving two clitics, as in example (93).

[30] In formulating the constraint in (90) so that it makes reference to both first and second person (rather than just to second person), I follow de Lacy 2002 who shows that limiting the formulation of all constraints that encode hierarchy effects to making reference to a span of elements in that hierarchy, anchored at the (marked) edge of a hierarchy is desirable in several ways. de Lacy points out that this way of formulating constraints that make reference to a hierarchy eliminates the need to stipulate a universally fixed ranking among such constraints. He also shows that allowing a free ranking of such constraints correctly predicts that some languages will treat a span of elements in a hierarchy as equivalent. We will see below that the local person alignment constraint in (90) captures the fact that first and second person elements are actually competing to align to the same edge, and this competition can result in the use of a portmanteau morpheme as we will see below.

In descriptive work, one often sees statements such as 'agreement elements obey the person hierarchy'. However, in Optimality Theory, the consultation of hierarchies is indirect: hierarchies determine how constraints are formulated, but it is the constraints that do the work, not the hierarchy itself.

[31] There is no need for a constraint that aligns third persons here, and I follow Gouskova 2003 who argues that constraints never target the least marked element in a hierarchy.

(93) Iye- ni- ma- čheča.
loc 2nd CL 1st sg CL resemble
'I resemble you.' or 'You resemble me.'
(Williamson 1979:359, Legendre and Rood 1992:389)

In this account, I am assuming that the clitics within a clitic cluster are not linearized in syntax, and that these alignment constraints apply at the syntax/PF interface. In contrast, I am assuming that the relative order of the clitic cluster and T agreement is fixed in syntax, and cannot be altered at PF. This has consequences which we examine in the next section.

2.4.2 PERSON ALIGNMENT CANNOT MOVE T AGREEMENT

In this section, we see that person alignment *cannot* reverse the order, presumably fixed in syntax, of a pronominal clitic followed ty T agreement, in example (94):

(94) Ma- ya- kte. [Lakota]
1sg CL 2sg TAGR kill
'You kill me.' (Shaw 1980:35, Legendre and Rood 1992:380)

As in the Romance languages, pronominal clitics are ordered before T agreement in Lakota, and person alignment cannot change this. This fact underscores an important point, that the two cross-referencing series differ not only in what they cross-reference, but also in their morphosyntactic properties.

Now, one might wonder why Lakota does not get around this problem by using two clitics (instead of one clitic and T agreement) in the above example, since we have seen that person alignment can order two clitics. The answer is that the constraint against using a clitic to cross-reference an external argument is ranked above the person alignment constraint. The tableau below in (95) shows why the combination of one clitic and T agreement is the best solution for the meaning 'you kill me', given the constraint ranking of Lakota. The input to PF from syntax has T agreement (with the nominative subject), and two pronominal clitics, cross-referencing subject and object. Both of the elements that cross-reference the external argument carry the feature [+ext]. These are only feature bundles in syntax, and the task at PF is to determine which of these cross-referencing elements will be spelled out, by inserting a morpheme. The candidates in (a) and (b) spell out all three cross-referencing elements, differing only in the order of the clitics within the clitic cluster. Candidates (c) through (e) eliminate the double cross-referencing

of the subject, with candidate (c) spelling out only T agreement and candidates (d) and (e) spelling out only the (nominative) clitic, with a different order of these clitics in (d) and (e).

(95) Transitive with a 2nd sg external argument and a 1st sg object

input: (2nd CL-1st CL)-2nd TAGR-verb [+ext] [-ext] [+ext]	MAX ([+LOCAL])	*PCL/[+EXT]	1ST[V ROOT]
a. 1st CL-2nd CL-2nd AGR-verb		*!	*
b. 2nd CL-1st CL-2nd AGR-verb		*!	*
→c. 1st CL-2nd AGR-verb			*
d. 1st CL-2nd CL-verb		*!	*
e. 2nd CL-1st CL-verb		*!	

The *PCL/[+EXT] constraint removes all candidates in which a pronominal clitic that carries the feature [+ext] as a result of cross-referencing an external argument: (a), (b), (d), (e). This leaves one candidate, (c), the winner, with the 1st CL-2nd AGR-verb pattern that actually surfaces in the example in (94) above. Although this candidate violates the person alignment constraint, this violation is tolerated because person alignment is ranked too low to have an effect (as shown by the shading). The contest is over before person alignment is even consulted.[32]

Something different happens in examples where the subject is first person and the object is second person. Instead of the *ni*(2nd clitic)-*wa*(1st Tagr) sequence that we expect, we find a portmanteau form:

(96) Čhi- kte.
1st-2nd PORTAGR kill
'I kill you.' (Boas and Deloria 1941:76)

The tableau below shows why this is a better solution than two forms lined up by person. Here the 'expected' form is compared with the portmanteau form that actually surfaces. The candidate in (a) with separate morphemes necessarily violates the local person alignment constraint, because both cannot simultaneously be aligned to the same edge. In candidate (b), both person features are combined into one morpheme, which is perfectly aligned to the left edge of the verb root:

[32] I have omitted to local version of the person alignment constraint from this tableau for simplicity of exposition, but I assume it is ranked adjacent to the first person alignment constraint, and is also too low to have any effect.

(97) Portmanteau Form

input: (2nd CL-1st CL)-1st T AGR-verb [-ext] [+ext] [+ext]	MAX ([+LOCAL])	*PCL/[+EXT]	LOCAL[V ROOT]	1ST[V ROOT]
a. 2nd CL-1st AGR-verb			*!	
→b. 1st-2nd AGR-verb				

This solution is only available when the subject person is higher than the object person, due to an independent constraint on portmanteau forms.

In the above example, we see one kind of exception to the basic active-stative pattern of Lakota: a form from the 'active' series (T agreement) can be used to cross-reference an internal argument, but only if it is a portmanteau form that also cross-references an external argument. In the next section, we turn to a different kind of exception to the basic active-stative pattern of Lakota, one in which it appears that a form from the 'stative' series (a pronominal clitic) is used to cross-reference an external argument. Exceptions of this sort are predicted under this OT account because the *PCL/[+EXT] constraint that produces the active-stative pattern is, in principle, violable by higher ranked constraints. Moreover, since we are operating at PF, the possibility exists that this higher ranked constraint is purely phonological, and this is exactly the situation in Lakota, as we see in the next two sections.

2.4.3 ONSET AFFECTS MORPHEME LINEARIZATION

McCarthy and Prince 1993 show that the phonological constraint that requires syllable to begin with a consonant, onset, has an effect on morpheme order in Lakota. The preferred position of locative prefixes is at the left edge of the prosodic word, as example (98)

(98) [Pwd a- wa- li]
loc-1st sg climb
'I climb.'

The reason, they argue, is that the locative prefix is part of the verb 'climb', but it is separated from the rest of the root in (98) in order to satisfy prosodic alignment, specifically to align the left edge of the verb with the left edge of the prosodic word. The prosodic alignment constraint is ROOT-ALIGN:

(99) ROOT-ALIGN Left edge of Root coincides with left edge of Prosodic Word.
(McCarthy and Prince 1993)

But something different happens when the cross-referencing prefix is the first person dual/plural morpheme *ũk*. In examples where the locative prefix is a single vowel, the *ũk* morpheme precedes the locative prefix, as in (100).

(100) ũk- a-li (ũ.ka.li)
1st pl -loc-climb
'I climb (up).

McCarthy and Prince argue that the ungrammatical order shown in (101) is rejected because it has an additional vowel initial syllable, producing an additional violation of the higher ranked ONSET constraint which prohibits vowel initial syllables.

(101) *a-ũk-li (a.ũ.li)[33]

(102) ONSET *[$_{\sigma}$V Prohibit a vowel at the left edge of a syllable.

The onset constraint is ranked above root align, and the competition is shown in the tableaux below. The winning candidate in (a) has only one vowel initial syllable, and thus only one violation of onset, while the candidate in (b) has two:

(103) ONSET dominates ROOT ALIGN

ũk-ali	ONSET	ROOT ALIGN
→a. [$_{Pwd}$ ũ.ka.li]	*	*
b. [$_{Pwd}$ a.ũ(k).li]	**!	

We thus see how the linearization of morphemes in the Lakota word can be affected by phonology. The discussion of Lakota in McCarthy and Prince 1993 is a brief part of a longer discussion of prosodic alignment, and it does not address examples where two cross-referencing forms are present. In fact, it does not initially appear that their analysis will help us understand why person alignment is violated in examples such as the following, where the second person clitic is closer to the verb root than is the first person form:

(104) Iye- ũ- ni- čheča pi.
loc 1st plCL 2ndCL resemble plural
'We (pl.) resemble you.' (Ullrich, personal communication)

When we compare the two possible orders of the clitics in the above example, we see that each

[33] The k does not surface before a consonant.

order, *ũ.ni*. and *ni.ũ* incurs exactly one ONSET violation.[34] The solution, I will argue, is to update the analysis of Lakota in McCarthy and Prince 1993 along the lines of McCarthy 2007 and Wolf 2008, so that morphemes are inserted/spelled out one at a time, and the choice of which morpheme to insert/spell-out first is determined by the ranked constraints.

McCarthy 2007 argues for a variant form of Optimality Theory called Harmonic Serialism which brings derivations into OT in a restricted way. Phonological changes are made one at a time, as in derivational approaches, but each step must improve the form with respect to the ranked constraints. Working within this framework, Wolf 2008 proposes that the same applies to morphological insertion/spell-out at PF. Morphemes are inserted one by one and phonological processes can be interleaved with morpheme insertion. What is important for us here is that phonological constraints can govern morpheme selection. This is easy to imagine in simple cases of allomorph selection, as in Lakota where *ũk* is selected preceding a vowel, while *ũ* is selected before a consonant, but Wolf shows that phonological constraints can also govern which morpheme is inserted/spelled out first, as a prosodic word is built up from the root, step by step. In the next section, I present an analysis building on this work under which ONSET can cause person alignment violations.

2.4.4 ONSET DRIVEN PERSON ALIGNMENT VIOLATIONS

If morphemes are spelled out one by one, and which to spell out first is determined by which best satisfies the constraint ranking, then a morpheme that obeys onset will be inserted before one that does not. In this section, I lay out the details of an account along these lines. In this account, the onset constraint is essentially what produces the clitic order *ũ-ni* in example (104), repeated below.

(104) Iye- ũ- ni- čheča pi.
loc 1stplCL 2ndCL resemble plural
'We (pl.) resemble you.' (Ullrich, personal communication)

The tableau below shows the competition in the second step of the spell-out process (the spell out

[34] Looking at these two forms in isolation, it might seem that the problem with the ungrammatical order, *ni.ũ*, is the presence of two adjacent vowels across a syllable boundary, violating the constraint NO HIATUS. However, when we look at this sequence in context with the preceding locative prefix *iye*, we see that switching the order of the two clitics just moves the NO HIATUS violation leftward, it does not actually remove it: *i.ye.ũ.ni* versus *i.ye.ni.ũ*. We will see below that there is no need for NO HIATUS in the account of these data, once the theory is updated. This result is consistent with the position in McCarthy and Prince 1993 that the theory should not contain both of the somewhat

of the verb root being the first step).[35] Three morphemes compete to be inserted, the 2nd clitic *ni*, shown in candidate (a), the 1st pl clitic *ũ(k)* in candidate (b) and the locative prefix in (c) whose underlying form is two vowels *ie*.[36] The ONSET constraint selects the spellout of *ni* as a better step than the spellout of *ũ(k)*, because *ũ* incurs an ONSET violation. The locative prefix, is an even worse choice, producing two ONSET violations:

(105) Competion among clitics and the locative prefix

input: [Pwd čheča] resemble	ONSET	ROOT ALIGN
→a. [Pwd ni.-čheča] 2nd		*
b. [Pwd *ũ.*- čheča] 1stpl	*!	*
c. [Pwd *i.e.*-čheča] loc	**!	

The winning candidate (a), [Pwd ni.-čheča], now forms the input to the competition at the next step, shown in the tableau below. Now the competition is between the remaining clitic and the locative prefix. The 1stpl clitic *ũ* is selected over the locative prefix *ie* because it incurs only one violation of ONSET rather than two.[37] The violation of the first person alignment constraint is necessarily tolerated here, if it is ranked below ONSET:

(106) Third Step

[Pwd ni.-čheča]	ONSET	1ST[V ROOT]
→a. [Pwd *ũ*- ni-čheča] 1stpl	*	*
b. [Pwd i.e-.ni-čheča] loc	**!	

That leaves the locative prefix to be inserted last (with subsequent glide insertion between the adjacent vowels) to produce the surface form of this example, repeated below:[38]

(107) Iye- ũ- ni- čheča pi.
loc 1stplCL 2ndCL resemble plural
'We (pl.) resemble you.' (Ullrich, personal communication)

---

similar constraints, ONSET and NO HIATUS, because under the proper constraint ranking, ONSET should do the work.

[35] In McCarthy 2007, constructing the prosodic structure is not a separate step.

[36] The glide *y* is inserted after *i* when it precedes another oral vowel, but not when the following vowel is nasalized (Boas and Deloria 1941: 10).

[37] There is actually also competition between the two allomorphs of the 1st plural, ũ and ũk. The NO CODA constraint, not shown here, eliminates ũk if it precedes a consonant.

We thus see that person alignment will not get a chance to apply unless the competing morphemes tie with respect to ONSET ; only then does the decision pass down to the lower ranked person alignment constraint.

In this section, we have seen that the phonological constraint ONSET can determine the linear order of pronominal clitics. In the next section, we turn to a situation in which onset disturbs the basic active-stative pattern, forcing the spell-out of a clitic instead of T agreement for an external argument.

2.4.5 ONSET DRIVEN DEVIATION FROM THE ACTIVE-STATIVE PATTERN

We saw in section 2.4.2 that the fixed position of T agreement, always following any pronominal clitic in Lakota, causes a violation of person alignment in examples such as the following.

(108) Ma- ya- kte. [Lakota]
1sgCL 2sgAGR kill
'You kill me.' (Shaw 1980:35, Legendre and Rood 1992:380)

In this section, we focus on active verbs with a 1st pl subject, where we find that the *ũ(k)* morpheme does not follow the clitic as we expect; instead, it precedes the clitic, making it initially appear that T agreement has switched positions with the object clitic:

(109) Ũ- ni- ćaśka pi.
1st pl 2nd CL bind pl
'We bind you.' (Riggs 1893:30)

However, it is not necessary to abandon the idea that the position of the clitic cluster is fixed in syntax with respect to the position of T agreement. The spell-out pattern in the above example is actually predicted by the analysis developed above, if what happens here is actually that T agreement is not spelled out at all in this example, and the *ũ(k)*tmorpheme we see is actually a pronominal clitic:

(110) Ũ- ni- ćaśka pi.
1st plCL 2nd CL bind pl
'We bind you.' (Riggs 1893:30)

This scenario is predicted under the analysis presented above if the ONSET constraint is ranked above the constraint that normally prevents the spell out of a pronominal clitic that cross-

[38] No *y* is inserted before the *ũ* in (104) because it is nasalized. (See footnote 36.)

references an external argument,*PCL/[+EXT].

(111) ONSET >> PCL/[+EXT] >> 1ST[V ROOT]

Let us see how this works in the tableau below. The input from syntax consists of an unlinearized cluster of two clitics, followed by T agreement and the verb root:

(112) Input from syntax: (2ndsgCL,1stplCL)-2ndsgTAGR-verb root

[+ext] [-ext] [+ext]

The spell-out process begins with spelling out the verb root, which serves as the input to the next step. Here the constraint ranking determines which of these three cross-referencing elements present in syntax to spell-out first. Given that two are vowel initial, the high ranked ONSET constraint eliminates both, leaving *ni-* as the winner:

(113) Step Two of 'We bind you.'

input: ćaśka bind	ONSET	*PCL/[+EXT]	1ST[V ROOT]
a. ũ- ćaśka 1stplTAGR	*!		
→b. ni- ćaśka 2ndsgCL			*
c. ũ- ćaśka 1stplCL	*!	*	

Assuming that the position of T is fixed in syntax, and also assuming that morphemes are spelled out in order from the root outward at PF, it is now not possible to back up and spell out T agreement. Instead, the only option left as the next step is to spell out the 1stpl clitic, producing the order *ũ-ni-*root that we see in example (110)

2.5 SECTION SUMMARY

Dahlstrom 1983 calls the pattern in Choctaw a more prototypic example of active-stative agreement than the pattern in Lakota. Although she was focusing more on the third person forms of Lakota, we have seen additional reason for this conclusion here. Higher constraints can disturb the basic active-stative pattern of Lakota even when first and second person elements are involved. Moreover, these constraints are phonological. This is what we expect to find as a possibility under the OT approach proposed here, building on the OT-CC version of the theory in McCarthy 2007 and its extension to morphology in Wolf 2008, where spell-out of morphemes is

one by one, and phonological and morphological constraints can be interleaved at PF. We have also seen that the tacit assumption in previous work that there ought to be a single principle that orders morphemes has no theoretical basis. Instead, morpheme order is produced by the interaction of several constraints, with the effect that patterns such as person alignment have surface exceptions.

3. THEORETICAL IMPLICATIONS AND TYPOLOGICAL PREDICTIONS

This approach does not allow complete freedom in deviating from the active-stative pattern. We saw above that the basic active-stative pattern of Lakota can be disturbed in the sense that the subject of an active verb can be cross-referenced by the 'wrong' form. However, the prediction of this account is that deviations in the other direction should not be possible. With the target of T agreement fixed in syntax as the nominative argument (which is always the subject in Lakota), there can be no deviations where T agreement is used to cross-reference an accusative object (unless there is portmanteau agreement). Thus this account agreement makes an important typological prediction:

(114) Typological Prediction

> A language may manifest an exception to the basic active-stative agreement pattern, but only one direction: a form from the 'stative' series can be used to cross-reference an external argument in exceptional circumstances, but a form from the 'active' series cannot be used to cross-reference an internal argument (except in the case of a portmanteau).

This prediction crucially involves syntax, because it is based on the fact that T agreement is normally restricted to nominatives, because of the probe-goal relation between T and a nominative argument.

The deviations we have seen from the basic active-stative pattern follow from independently motivated constraints such as onset and person alignment. Many approaches to active-stative agreement lack the flexibility to accommodate such deviations. This is true of approaches with a direct mapping rule that says something like 'cross-reference external arguments with the 'active' series', unless such mapping rules are violable as in Legendre and Rude 1992. This lack of flexibility is also characteristic of purely case-based approaches.

This approach is does not add a new kind of agreement to the theory, but rather restricts

the distribution of known kinds of agreement. Approaches that do propose a new kind of agreement that targets argument structure categories directly, predict a range of mixed systems where this new kind of agreement coexists with known kinds of agreement. The proposal in Boyle 2000, for example, essentially adds inherent agreement to the theory, licensed by little v to external arguments. Under that approach, we should find languages with both structural and inherent agreement (given that a language can have both structural and inherent case). Such an approach would predict a language where inherent agreement cross-references external arguments, T agreement cross-references (other) subjects, and pronominal clitics cross-references objects. I know of no such language.

Under this approach, the split in T agreement is an indirect consequence of the constraint ranking. There is a restriction on pronominal clitics, preventing them from cross-referencing external arguments (in the surface pattern), and the split in T agreement is the result of a doubling restriction so that T agreement will cross-reference only the residue of what pronominal clitics cannot (external arguments). It is interesting to note that there is a language in which there is no such doubling restriction, and T agreement cross-references all subjects, while pronominal clitics behave as in Choctaw and Lakota, cross-referencing all arguments except external arguments. This language is Nuaulu (Austronesian, Indonesian) described in Donohue 2008, based on data from Bolton 1990:36-42. T agreement (as I identify the form) is prefixed to the verb while a pronominal clitic is suffixed, as we see in the transitive example in (115).

(115) U- sosa -i.
1st Tagr- rub- -3rd pclitic
'I'm shining it.' (Donohue 2008:57, with Tagr and pclitic glosses added)

In intransitive verbs with an external argument, as in example (116), the prefixed T agreement cross-references the subject (as in Choctaw and Lakota); but with intransitives whose subject is an internal argument, there is double cross-referencing with both T agreement and a pronominal clitic, as shown in example (117).

(116) U- anamana.
1st Tagr-speak
'I'll speak.' (Donohue 2008: 57)

(117) U- ampeta -ku. [double cross-referencing]
1st Tagr- wet- -1st sg.pclitic
'I am wet.' (Donohue 2008: 57)

The existence of this pattern reinforces the claim that there is double cross-referencing in syntax, and it is normally screened out only at spell-out. This pattern also supports the claim that the primary split is actually on the 'stative' series, identified here as pronominal clitics, and the split on the 'active' series is a secondary effect, which may or may not occur in a language.

4. CONCLUSION

Active-stative agreement patterns are produced at the syntax/PF interface, by constraints that result in a split in the surface distribution of T agreement. There is a general preference for using pronominal clitics (incorporated pronouns) in such languages, but using a clitic for an external argument is normally blocked by a constraint from the family of constraints that prohibit spell-out of a marked element in the presence of another marked element. Specifically, the constraint that produces the active-stative patter prohibits spelling out a pronominal clitic that carries the feature [+external], as a result of cross-referencing an external argument. Evidence that PF is involved and that an OT account is necessary comes from the fact that phonological constraints such as ONSET can not only determine the linear order of cross-referencing morphemes, but can even interfere with the basic active-stative pattern.

This new account of active-stative languages is more restrictive than previous accounts that postulate an otherwise unattested covert case system where all unaccusative subjects get accusative case. It is also more restrictive than previous accounts that postulate a distinct type of agreement for active-stative languages that targets argument structure categories directly. Such an account essentially adds inherent agreement to the paper, with the prediction that we should find languages with both structural and inherent agreement in a mixed system. That predicts patterns that do not appear to occur. Adding a new type of agreement is unnecessary in the new account presented here, where the 'active' cross-referencing forms are ordinary T agreement, and the 'stative' cross-referencing forms are pronominal clitics (also called incorporated pronouns). T agreement is limited to cross-referencing nominative subjects in Choctaw and Lakota, as in many languages. What is different about active-stative agreement is that pronominal clitics (which are not distinguished by case) are used to cross-reference all arguments except external arguments, including subjects.

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