

A SEMANTIC CONTRIBUTION TO
CHOCTAW REFERENTIAL CODING PHENOMENA*

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1 Introduction

Human languages contain a wide range of phenomena for grammatically signalling relationships between clausal and sentential elements. A subclass of these, such as agreement, pronominalization, reflexivization, switch reference, and others, can be termed NP referential coding phenomena since information referring to particular attributes (e.g. person, number) of NPs is morphologically coded on other elements in the clause or sentence. Most often such referential coding is conceived of as a syntactic process since the rules required for these codings are generally sensitive to the grammatical properties of the NPs they reference, properties such as grammatical relation, person, number, gender, case, and others.

While in many cases a purely syntactic account of referential coding phenomena can provide an adequate and insightful account of the data, such is not always the case. In the present paper I examine certain verb agreement and switch reference data from Choctaw, a Muskogean language, which show that syntactic information must be augmented with semantic information in order to adequately account for the data. In particular, in these data possessors may optionally supersede inalienably possessed body parts as the NPs referenced by the appropriate coding rules.

2 Verb Agreement in Choctaw

Subjects, direct objects, indirect objects, and beneficiaries can all be marked on the predicate of the clause in which they occur.¹ For the most part, this can be described as follows:

(1) Verb Agreement Rules²

- a. Subjects determine nominative agreement.
- b. Direct objects determine accusative agreement.
- c. Indirect objects determine dative agreement.
- d. Beneficiaries determine benefactive agreement.

This agreement is illustrated in the clauses in (2)-(4).³

- (2) Chi-bashli-li-tok.
2Acc-cut-1Nom-Pst
'I cut you.'

- (3) Holisso chim-a:-li-tok.
 book 2Dat-give-1Nom-Pst
 'I gave the book to you.'
- (4) Alla ofi imi lhioli-li-tok.
 child dog 3Ben chase-1Nom-Pst
 'I chased the dog for the child.'

In (2) the subject, whose nonoccurring pronominal form is ano 'I',⁴ determines the first person singular nominative morpheme li, and the direct object, whose nonoccurring pronominal form is chishno 'you', determines the second person singular accusative morpheme chi. In (3) we again have the first person singular nominative morpheme marking the subject and a \emptyset -morpheme marking the third person accusative agreement determine by holisso 'book'.⁵ In addition, the indirect object is marked by a second person singular dative morpheme chim. The clause in (4) illustrates benefactive agreement; the third person beneficiary, alla 'child', determines the third person benefactive morpheme imi. In all cases the morphemes must occur in the verbal complex (the verb plus inflectional markers) in order for the clauses to have the desired meanings, i.e., verb agreement is obligatory.

In each of the clauses in (2)-(4), the agreement morphemes which occur in the verbal complex mark the person and number of the NPs in the clause which trigger the agreement. However, the situation is more complex when considering clauses which have a possessed body part as subject or direct object.

- (5) a. Sa-yyi-t basha.
 1Poss-foot-Nom cut
 'My foot is cut.'
- b. Sa-yyi-t sa-basha.
 1Poss-foot-Nom 1Acc-cut
 'My foot is cut./I am cut on my foot.'
- (6) a. Chi-nishkin-a-t hottopa-h-õ?
 2Poss-eye-Dt-Nom hurt-Pred-Q
 'Do your eyes hurt?'
- b. Chi-nishkin-a-t chi-hottopa-h-õ?
 2Poss-eye-Dt-Nom 2Acc-hurt-Pred-Q
 'Do your eyes hurt?/Do you hurt in your eyes?'
- (7) a. Ofi-t sa-bbak kopoli-tok.
 dog-Nom 1Poss-hand bite-Pst
 'The dog bit my hand.'
- b. Ofi-t sa-bbak sa-kopoli-tok.
 dog-Nom 1Poss-hand 1Acc-bite-Pst
 'The dog bit my hand./The dog bit me on my hand.'

In the a clauses in (5)-(7) we get the expected agreement morphemes. In each case there is a third person singular NP determining agreement, which occurs as a \emptyset -morpheme. However, in the b clauses there is what appears to be an accusative morpheme agreeing in person and number with the possessor of each of the body parts. The problem then is to account for the accusative morphemes in the verbal complexes in (5b), (6b), and (7b).

One important question to consider is whether or not the accusative morphemes in the relevant clauses are agreement morphemes. One might hypothesize that the possessive prefixes have simply been copied onto the predicates of these clauses. However, such an analysis is ruled out by data such as that in (8) and (9).

- (8) a. Issoba-t am-ãshaka habli-tok.
horse-Nom 1Poss-behind kick-Pst
'The horse kicked my behind.'
- b. Issoba-t am-ãshaka sa-habli-tok.
horse-Nom 1Poss-behind 1Acc-kick-Pst
'The horse kicked my behind./The horse kicked me
in my behind.'
- (9) a. Am-anokfila-t okpolo.
1Poss-think-Nom broken
'My mind is troubled.'
- b. Am-anokfila-t si-okpolo.
1Poss-think-Nom 1Acc-broken
'My mind is troubled./I am troubled in my mind.'

In (8) the direct object is a possessed body part, am-ãshaka 'my behind'. Here the first person possessive prefix is am, the prefix generally used to show inalienable possession.⁶ The hypothesis which claims that the accusative morphemes in (5b), (6b), and (7b) are copies of the possessive prefix predicts that the morpheme marking the possessor in the verbal complex in both (8b) and (9b) should be am. However, the morpheme which in fact occurs is the first person singular accusative morpheme. This fact (in addition to switch reference data considered in §3) casts doubt on the copying analysis.

The analysis I propose is that Choctaw speakers perceive body parts as symbolic of the whole being. That is, if a single part of an animate being is affected by some action or state, the whole being is so affected. Therefore, the possessor of a body part may determine agreement in the place of the body part. Under this analysis, the accusative markers which occur in the b clauses in (5)-(9) are agreement markers determined by the possessors of the body parts.

One argument for this analysis is that the agreement normally determined by NPs in these environments is accusative agreement.

One expects accusative agreement with direct objects given the rule in (1), as in (10) and (11).

- (10) Ofi-t sa-kopoli-tok.
 dog-Nom 1Acc-bite-Pst
 'The dog bit me.'
- (11) Issoba-t sa-habli-tok.
 horse-Nom 1Acc-kick-Pst
 'The horse kicked me.'

In both (10) and (11) the direct object is marked by the first person singular accusative morpheme sa. Compare these to (7b) and (8b), in which a body part functioning as direct object has a first person singular possessor and there is a first person singular accusative agreement morpheme in the verbal complex. Since accusative agreement is expected with direct objects, accusative morphemes in (7b) and (8b) are consistent with an analysis in which possessors can take the place of body parts in the determination of agreement.

Likewise, subjects of clauses containing the predicates basha 'cut' and hottopa 'hurt' determine accusative agreement.

- (12) Sa-basha
 1Acc-cut
 'I am cut.'
- (13) Chi-hottopa-h-õ?
 2Acc-hurt-Pred-Q
 'Are you hurt?'

In both (12) and (13) the subject of the clause is marked by an accusative agreement morpheme, sa '1Acc' in (12) and chi '2Acc' in (13). At first this seems to contradict the agreement generalization in (1) that subjects determine nominative agreement. However, I have argued elsewhere (Davies 1981a) that the subjects of clauses such as (12) and (13) are actually direct objects at the initial level of structure and subjects at the final level of structure, what is referred to as an unaccusative structure in the relational grammar literature (Perlmutter 1978, Perlmutter and Postal 1978). The accusative agreement marking is consistent with the unaccusative analysis since the NPs in (12) and (13) are direct objects at the initial level of structure.⁷ Since accusative agreement is expected with the subjects of basha and hottopa, the accusative morphemes in (5b) and (6b) are consistent with the analysis in which the possessor of a body part can optionally be referenced by agreement. The fact that these accusative morphemes occur only in environments in which one expects accusative agreement indicates that the morphemes may well be agreement morphemes.

An alternative account of the fact that the possessors in (5b),

(6b), and (9b) determine agreement is that they are actually the subjects of their respective clauses. At first blush, one might consider the English translations supporting evidence. However, if this were the case, one would have to account for the fact that the body parts in these clauses are marked for nominative case. In Choctaw, only subjects can take nominative case marking (cf. Davies 1981a), and clauses in which these body parts are not marked for nominative case are ungrammatical.

(5) b'. *Sa-yyi sa-basha.

(6) b'. *Chi-nishkin chi-hottopa-h-õ?

(9) b'. *Am-anokfila si-okpolo.

Therefore, the body parts must be considered subjects, and one would be forced to propose an analysis in which both the body part and its possessor function as grammatical subjects. Such an analysis is not wholly dissimilar to that I wish to propose, i.e., if the body part is the subject and is symbolic of the entire possessor, the possessor is in a sense also conceived of as the subject. However, the proposed analysis differs in that there is no claim that the possessor is a grammatical subject, only that the agreement is optionally triggered by it.

Additional evidence that the morpheme is indeed an agreement marker comes from a special construction in Choctaw. In certain Choctaw clauses it is possible for what appears to be a direct object to determine dative agreement. This is illustrated in the clause pairs in (14) and (15).

(14) a. Chi-alikchi-li-tok.
2Acc-doctor-1Nom-Pst
'I doctored you.'

b. Chim-alikchi-li-tok.
2Dat-doctor-1Nom-Pst
'I doctored you.'

(15) a. Issoba shilli-li-tok.
horse comb-1Nom-Pst
'I combed the horse.'

b. Issoba ĩ-shilli-li-tok.
horse 3Dat-comb-1Nom-Pst
'I combed the horse.'

In (14a) and (15a), as expected, the direct objects are marked on the predicate by accusative agreement morphemes, chi '2Acc' and a \emptyset -morpheme, respectively. However, in the b clauses the same NPs are marked by the dative agreement morphemes chim '2Dat' and ĩ '3Dat'. Elsewhere (Davies 1981a, 1982) I have argued that clauses such as (14b) and (15b) have a structure in which an initial direct object demotes to indirect object.

This accounts for the dative agreement morphemes and other facts which need not concern us here.⁸

Consider the clauses in (16).

- (16) a. Oho:yo-t sa-ppāshi shilli-tok.
 woman-Nom 1Poss-hair comb-Pst
 'The woman combed my hair.'
- b. Oho:yo-t sa-ppāshi ĭ-shilli-tok.
 woman-Nom 1Poss-hair 3Dat-comb-Pst
 'The woman combed my hair.'
- c. Oho:yo-t sa-ppāshi ā-shilli-tok.
 woman-Nom 1Poss-hair 1Dat-comb-Pst
 'The woman combed my hair.'

In (16a) sa-ppāshi 'my hair' is a final direct object and determines the expected third person accusative agreement \emptyset -morpheme. In (16b) sa-ppāshi determines a third person dative agreement morpheme ĭ, signalling that it has demoted to indirect object. However, in the verbal complex in (16c) we find a first person singular dative agreement morpheme, ā, which agrees in person and number with the possessor of the body part. We can account for this as a case in which sa-ppāshi 'my hair' has demoted to indirect object and its possessor then determines agreement in the verbal complex. As we have seen in (14b), (15b), and (16b), in this environment dative agreement is expected. Therefore, the clause in (16c) provides an argument for considering this morpheme to be an agreement morpheme.⁹

Another argument for the proposed semantic analysis is the fact that this additional agreement option is possible only when the possessed noun is an inalienably possessed body part. Possessors of alienably possessed nouns *(17b) and possessors of kin terms *(18b) cannot determine agreement.

- (17) a. Issoba-t am-ofi habli-tok.
 horse-Nom 1Poss-dog kick-Pst
 'The horse kicked my dog.'
- b. *Issoba-t am-ofi sa-habli-tok.
- (18) a. Ofi-t si-oshi kopoli-tok.
 dog-Nom 1Poss-son bite-Pst
 'The dog bit my son.'
- b. *Ofi-t si-oshi sa-kopoli-tok.

The ungrammaticality of *(17b) and *(18b) is attributable to the fact that the possessor has determined an accusative agreement morpheme in the verbal complex.

In addition, possessors of alienably possessed body parts cannot determine agreement. When a body part which normally takes a possessive prefix from the set of prefixes which correspond to the accusative agreement morphemes takes a possessive prefix from the set of prefixes which correspond closely to dative agreement morphemes, the possessor is perceived as owning the body part, i.e., possession is alienable, not inalienable. In (19) am-iiyi talhlha:pi 'my five legs' refers to legs that I own, not to legs attached to my body.

- (19) a. Am-iiyi talhlha:pi aĩpa asha:chi-li-tok.
 1Poss-leg five table put-1Nom-Pst
 'I put my five legs on the table.'
- b. *Am-iiyi talhlha:pi aĩpa asha:chi-li-tok.

When the possessor of an alienably possessed body part determines agreement, as in *(19b), the clause is ungrammatical.

The fact that only possessors of inalienably possessed body parts can optionally determine agreement supports the proposed semantic analysis. One might well ask why only this limited class of possession should be involved; any possession can hypothetically be viewed as an extension of the possessor. However, in the real world it is the case that when something is true of an item which is "physically attached" to the possessor, by extension the same is true of the possessor. When a person's hand is cut, it is also true that that person is cut. When a person's head aches, that person in fact aches. The reference to the body part merely further specifies the particular part of a person for which an event or state is predicated. Such an extension seems intuitively less plausible when the item for which an event or state is predicated is not physically a part of the possessor. Therefore, the data indicate that in the Choctaw world view any body part is indeed symbolic of the entire being of which it is a part.

3 Switch Reference

Another form of referential coding in Choctaw is the switch reference system, which morphologically distinguishes whether or not clause pairs have coreferential subjects. The view of a body part as symbolic of the whole being is manifested once again.

Switch reference marking in Choctaw generally follows the rule in (20).

- (20) Switch Reference Marking¹⁰
- a. Same-subject (SS) marking occurs if the subject of clause A is coreferential with the subject of clause B.
 - b. Switch-reference (SR) marking occurs if the subject of clause A is not coreferential with the subject of clause B.

Switch reference marking is illustrated in (21) and (22).

- (21) a. Ofi poshohli-li-cha tamaha ia-li-tok.
 dog rub-1Nom-SS town go-1Nom-Pst
 'I patted the dog and went to town.'
 b. *Ofi poshohli-li-na tamaha ia-li-tok.
 SR
- (22) a. Tobi apa-li-na tãchi ish-pa-tok.
 beans eat-1Nom-SR corn 2Nom-eat-Pst
 'I ate beans, and you ate corn.'
 b. *Tobi apa-li-cha tãchi ish-pa-tok.
 SS

In (21) the subject of each clause is 'I' and coordination can be marked with the SS suffix cha (21a) but not the SR suffix na *(21b). Conversely, in (22) the subject of the first clause is 'I' and the subject of the second is 'you'; here SR marking occurs (22a) but SS marking cannot *(22b).

However, when a body part is the subject of a clause and the subject of the other clause is the possessor of the body part, either SS or SR marking is possible.

- (23) a. Sa-nishkin-a-t hottopa-na okhĩsh chõpa-li-tok.
 1Poss-eye-Dt-Nom hurt-SR medicine buy-1Nom-Pst
 'My eyes hurt, so I bought some medicine.'
 b. Sa-nishkin-a-t hottopa-cha okhĩsh chõpa-li-tok.
 1Poss-eye-Dt-Nom hurt-SS medicine buy-1Nom-Pst
 'My eyes hurt, so I bought some medicine.'
- (24) a. Oka lawa tahli-li-na sa-ttakoba-t hottopa.
 water much finish-1Nom-SR 1Poss-stomach-Nom hurt
 'I had a lot of water, and my stomach hurts.'
 b. Oka lawa tahli-li-cha sa-ttakoba-t hottopa.
 water much finish-1Nom-SS 1Poss-stomach-Nom hurt
 'I had a lot of water, and my stomach hurts.'
- (25) a. Sa-ppãshi-t lakna-kã ikha:na-li.
 1Poss-hair-Nom yellow-Comp=SR know-1Nom
 'I know my hair is yellow.'
 b. Sa-ppãshi-t lakna-ka-t ikha:na-li.
 1Poss-hair-Nom yellow-Comp-SS know-1Nom
 'I know my hair is yellow.'

(23) and (24) show that the body part can occur in either the first or second of two conjoined clauses. In (25) the possessor is the subject of the matrix clause and the body part is the subject of the embedded

clause.

The analysis which allows a body part to be symbolic of the entity of which it is a part allows an account of these otherwise problematic data. The SR marking on the first clause in (23a), (24a), and (25a) is accounted for by the rule in (20b). Since in each sentence the subject of one clause is a body part and the subject of the other is 'I', the subjects are not coreferent and SR marking follows. However, in each of the b sentences the first clause has SS marking. If the body part is taken as symbolic of the possessor and the rule in (20) is sensitive to the possessor (and not the body part), the subjects of the two clauses are both 'I' in each case. therefore, the subjects of the clauses are coreferent, satisfying (20a), and SS marking occurs. As in the case of possessors determining agreement, referencing the possessor by the switch reference rule is optional.

Similar phenomena have been noted in other languages. Marlett (1981) reports that in Seri, a Hokan language of northwestern Mexico, certain body parts or references to a person appear to be referential of the entire person. In sentences in which one of these nouns occurs as the subject of a clause, switch reference (change of referent) is not marked on the dependent clause when the subject of the following clause is the possessor of that noun, as in (26).

- (26) ?asaiti kap ?i-mos k^w-t-oit \emptyset i?-y-iXt.
 gasoline the my-heart 3Obl-mood-descend same I-mood-take
 'My heart fell on (=I remembered) the gas, I took it.'

However, the Seri phenomenon is not as widespread as that in Choctaw. For example, (27) would be ungrammatical without the switch-reference marker, i.e., the body part, 'hand', is not taken as symbolic of the entire being.

- (27) mi-nt ki? po- $\text{\textcircled{H}}$ atX ta-X im-s-o:?a ?a-?a.
 your-hands the mood-thorny different-UT your-mood-cry Aux-Decl
 'If your hands get thorns in them, you will cry.'

Payne (1980) also reports similar data in Chickasaw, the Muskogean language most closely related to Choctaw. She claims that when an inalienably possessed noun is the subject of a clause in a sentence, if the subject of the other clause is the possessor of that noun either same-referent (SR) marking can occur, as in (28a), or different-referent (DR) marking can occur, as in (28b).

- (28) a. Sa-sipokni taha-hma-t sa-hakshop-at banata taha.
 lsgP-old finish-Med-SR lsgP-skin-Sub wrinkled finish
 'When I'm old, my skin will be wrinkled.'
 b. Sa-sipokni taha-hmã sa-hakshop-at banata taha.
 lsgP-old finish-Med=DR lsgP-skin-Sub wrinkled finish
 'When I'm old, my skin will be wrinkled.'

All of the examples cited by Payne include possessed body parts, so the Chickasaw strategy may well be the same as that in Choctaw.

Further, the Choctaw data indicate that there is no correlation between exercising the options to reference the possessor for agreement or switch reference. The data in (23)-(25) show that the possessor can be referenced for switch reference in the absence of agreement with the possessor. Further evidence of the independence of choice is shown in the sentences in (29), which are counterparts of (23) in which the possessor determines agreement in the first clause.

- (29) a. Sa-nishkin-a-t sa-hottopa-na okhĩsh chõpa-li-tok.
 1Poss-eye-Dt-Nom 1Acc-hurt-SR medicine buy-1Nom-Pst
 'My eyes hurt, so I bought some medicine.'
- b. Sa-nishkin-a-t sa-hottopa-cha okhĩsh chõpa-li-tok.
 1Poss-eye-Dt-Nom 1Acc-hurt-SS medicine buy-1Nom-Pst
 'My eyes hurt, so I bought some medicine.'

Importantly, even if the possessor determines agreement, SR marking is possible, (29a).

Additionally, if the specific body part is not explicitly referred to, both options are still available to speakers.

- (30) a. Hottopa-na alikchi ia-li-tok.
 hurt-SR doctor go-1Nom-Pst
 'It hurt, so I went to the doctor.'
- b. Hottopa-cha alikchi ia-li-tok.
 hurt-SS doctor go-1Nom-Pst
 'It hurt, so I went to the doctor.'
- c. Sa-hottopa-na alikchi ia-li-tok.¹¹
 1Acc-hurt-SR doctor go-1Nom-Pst
 'I/it hurt, so I went to the doctor.'
- d. Sa-hottopa-cha alikchi ia-li-tok.
 1Acc-hurt-SS doctor go-1Nom-Pst
 'I/it hurt, so I went to the doctor.'

The switch reference data in which the possessor of a body part is referenced for SS marking provides an additional argument against the analysis considered briefly in §2 in which both the body part and the possessor were grammatical subjects of the same clause. In the sentences in (23b), (24b), and (25b) the possessor of a body part is considered by the switch reference rule and SS marking results. One might again wish to argue that in fact since both SS and SR marking are possible that both the body part and its possessor are grammatical subjects in the same clause. However, such an analysis is not tenable in this case. Crucially, even when considered the subject for switch

reference marking, the possessors in these clauses do not determine agreement in the verbal complexes of their respective clauses. As was mentioned earlier in §2, agreement in Choctaw is obligatory. If these possessors were to be considered subjects of these clauses, they would have to determine agreement. Since they do not, they cannot be considered subjects. Therefore, the switch reference data support the contention that referential coding rules can be sensitive to possessors of body parts since the body parts are symbolic of the entire possessor.

4 Conditions on Optional Reference

Having established the semantic contribution to these largely syntactic referential coding mechanisms, the question remains as to the necessary conditions for employing the particular agreement and switch reference options. I first make explicit one syntactic condition on these phenomena and then address the larger question of variability.

Not all possessors¹² may determine agreement. In the examples in §2, the body parts are all direct objects at some level of structure.¹³ When the body part is the subject of an unergative clause (an intransitive clause in which the subject is a subject at all levels of structure (Perlmutter 1978, Perlmutter and Postal 1978)), the possessor cannot determine agreement.

- (31) a. Sa-yyi-t hilha-tok.
 lPoss-foot-Nom dance-Pst
 'My feet danced.'
- b.*Sa-yyi-t hilha-li-tok.¹⁴
 lPoss-foot-Nom dance-lNom-Pst
 ('My feet danced.')
- c.*Sa-yyi-t sa-hilha-tok.
 lPoss-foot-Nom lAcc-dance-Pst
 ('My feet danced.')

In *(31b) the first person singular possessor of 'feet' determines agreement li 'lNom' and the clause is ungrammatical. *(31c), in which the possessor is marked by the accusative agreement morpheme, is also ungrammatical; however, this follows from the fact that accusative agreement is inappropriate for unergative subjects (cf. note 14).

Neither can the possessor determine agreement when the body part is the subject of a transitive clause.

- (32) a. Sa-bbak-a-t okwissoshi lhopolli-tok.
 lPoss-hand-Dt-Nom window go through-Pst
 'My hand went through the window.'

- (32) b. *Sa-bbak-a-t okwissoshi lhopolli-li-tok.¹⁵
 lPoss-hand-Dt-Nom window go through-lNom-Pst
 ('My hand went through the window.')
- c. *Sa-bbak-a-t okwissoshi sa-lhopolli-tok.
 lPoss-hand-Dt-Nom window lAcc-go through-Pst
 ('My hand went through the window.')

The ungrammaticality of *(32b) and *(32c) parallels the ungrammaticality of *(31b) and *(31c).

These data point to the fact that possessors can determine agreement only when the body part bears the direct object relation at some level of structure, perhaps restricted to the initial level. (Due to the acute semantic peculiarity of such clause, I have found it impossible to test whether or not possessors of body parts functioning as initial indirect objects or beneficiaries can determine agreement.)

The same restriction is relevant to the switch reference phenomena. In those cases in §3 in which the possessor is considered for switch reference marking, the body part is the subject of an unaccusative clause, i.e., the body part is initially a direct object. When the body part is an unergative or transitive subject, switch reference marking cannot be sensitive to the possessor.

- (33) a. Sa-yyi-t hilha-na sa-nayokpa-tok.
 lPoss-foot-Nom dance-SR lAcc-happy-Pst
 'My feet danced, and I was happy.'
- b. *Sa-yyi-t hilha-cha sa-nayokpa-tok.
 lPoss-foot-Nom dance-SS lAcc-happy-Pst
 ('My feet danced, and I was happy.')
- (34) a. Sa-bbak-a-t okwissoshi lhopolli-na yaya-li-tok.
 lPoss-hand-Dt-Nom window go through-SR cry-lNom-Pst
 'My hand went through the window, and I cried.'
- b. *Sa-bbak-a-t okwissoshi lhopolli-cha yaya-li-tok.
 lPoss-hand-Dt-Nom window go through-SS cry-lNom-Pst
 ('My hand went through the window, and I cried.')

In both (33) and (34) the subject of one of the clauses is a possessed body part that is not a direct object at any level of structure. When SR marking occurs on the first clauses, the sentences are grammatical, (33a) and (34a), because the rule of SR marking (20b) is satisfied. When the switch reference rule is sensitive to the possessor, the SS marking condition is satisfied; however, when SS marking occurs on the first clause, the sentences are ungrammatical, *(33b) and *(34b).

Given the above data, the following restriction must be placed on the extended reference of body parts:

- (35) A Choctaw referential coding rule may be sensitive to the possessor of a body part if and only if the body part is inalienably possessed and bears the direct object relation to its clause.¹⁶

Yet to be considered is the question of under what circumstances each of the options of referential coding is chosen. One might well hypothesize that given the existence of these options, the various expressions signal meaning differences, due to either semantic or pragmatic considerations. Here there appear to be few clearcut answers. One finds that there is variability between and within speakers and that explanations are elusive.

However, for one speaker there may be pragmatic conditions which affect switch reference marking. Consider the sentences in (36).

- (36) a. Sa-bbak-a-t hottopa-cha alikchi ia-li-tok.
 1Poss-hand-Dt-Nom hurt-SS doctor go-1Nom-Pst
 'My hand hurt, so I went to the doctor.'
- b. Sa-bbak-a-t hottopa-na alikchi ia-li-tok.
 1Poss-hand-Dt-Nom hurt-SR doctor go-1Nom-Pst
 'My hand hurt, so I went to the doctor.'

This speaker reports that (36a), in which SS marking occurs, is an appropriate response to the question 'Why did you go to the doctor?', while (36b), in which SR marking occurs, is appropriate to the question 'How is your hand?' From this one might hypothesize that SS marking is more appropriate when the possessor of the body part is the topic of discourse and SR marking is more appropriate when the body part is topic. However, as previously stated, this may not hold for all speakers.

Similarly, speakers give alternative translations for clauses when possessors determine agreement.

- (37) a. Sa-noshkobo ish-isso-tok.
 1Poss-head 2Nom-hit-Pst
 'You hit my head.'
- b. Sa-noshkobo is-sa-sso-tok.
 1Poss-head 2Nom-1Acc-hit-Pst
 'You hit my head./You hit me on my head,'

In (37b) we see that the possessor can be given more prominence in the translation. This signals the fact that when a possessor determines agreement it is in a position of greater emphasis than when it does not. In other words, the possessor is conceived of as being more acutely affected by the action.

Pragmatic accounts of the agreement and switch reference variability must be considered tentative. However, the results thus far

indicate that this line of investigation is a viable strategy for re-searching this question.

5 Conclusion

Studying variability in switch reference in Yuman languages, Langdon and Munro (1979) describe situations in which switch reference marking choice cannot be determined solely on syntactic grounds. They show that options are available to speakers; while there is some individual variation (as is the case in the Choctaw data), speakers largely make choices based on both syntactic and semantic considerations. They conclude that attempts at either purely semantic or purely syntactic analyses fail to provide an account of the data. In the same way, the Choctaw data considered here show that some semantic information (beyond grammatical information such as person, number, gender, etc.) must be available to the syntactic component for referential coding phenomena such as verb agreement and switch reference marking.

NOTES

*The Choctaw data presented in this paper were elicited during field work conducted in southeastern Oklahoma during 1980 and during work during 1981 and 1982 with a speaker from that area living in San Diego. This work was supported in part by the National Science Foundation through grant no. BNS 78-17498 to the University of California, San Diego and by the American Philosophical Society through a Phillips Fund grant.

1 Choctaw verb agreement has been referred to as inseparable pronouns (Byington 1870), echoes (Nicklas 1972; Jacob, Nicklas, and Spencer 1977) and case affixes (Heath 1977). Additionally, some have used semantic notions such as actor (Jacob, Nicklas, and Spencer 1977), agentive (Heath 1977), and patient (Heath 1977; Jacob, Nicklas, and Spencer 1977) rather than the syntactic notions used here. The syntactic names used here allow cross-linguistic similarities between Choctaw verb agreement and nominal case in other languages to be more readily recognized. Cf. Davies 1981a and note 16 for arguments against a purely semantic characterization of Choctaw verb agreement.

2 In Davies 1981a I argue that the rules in (1) must apply to each NP in a clause disjunctively in the order c, b, a, d. See that discussion for further details and examples of these rules.

3 In the presentation of the Choctaw data, I have used certain digraphs consistent with the generally recognized Choctaw orthography, i.e., ch = /tʃ/, lh = /lɬ/, and sh = /ʃ/. Other consonants and vowels follow the IPA.

4 As in many other Amerindian languages, unemphatic pronouns do not occur in Choctaw utterances. I refer to pronouns here to facilitate discussion.

5 Third person nominative and accusative agreement morphemes are \emptyset -morphemes.

6 Generally, inalienable possession in Choctaw is marked by one of a set of prefixes which are nearly identical with the accusative agreement markers and alienable possession is marked by one of a set of prefixes which are nearly identical with the dative agreement markers. However, certain words which have other uses in the language are marked by alienable possessive prefixes when functioning as inalienably possessed body parts or kin terms. The postposition āshaka 'behind' in (8) and the verb anokfila 'think' in (9) exemplify this.

7 Cf. Davies 1981a for further details of the unaccusative structure in Choctaw and its interaction with verb agreement.

8 Cf. Davies 1981a, 1982 for more details concerning this structure.

9 Notice that a possessive prefix copying analysis fails to account for (16c) since the possessive prefix and the morpheme in the verbal complex are of distinct types.

10 Cf. Davies 1981a, b for a more detailed discussion of switch reference in Choctaw.

11 Both translations in (30c) and (30d) are possible, but 'I hurt, so I went to the doctor' is preferred by most speakers to 'It hurt, so I went to the doctor'.

12 In this section I use possessor to refer only to possessors of inalienably possessed body parts.

13 Recall the discussion of the unaccusative and direct object demotion structures in §2.

14 Since the subject of an unergative clause is a subject at all levels of structure, it determines nominative agreement following the rule in (1), as in (i).

- (i) Hilha-li-tok.
 dance-1Nom-Pst
 'I danced.'

15 In Choctaw the subject of a finally transitive clause is a subject at all levels of structure and therefore determines nominative agreement, as in (i).

- (i) Okwissoshi lhopolli-li-tok.
 window go through-1Nom-Pst
 'I went through the window.'

16 It may also be possible to formulate this condition in terms of the notion 'patient', with the generally accepted sense of the affected NP. However, I have stated the condition in terms of direct object for two reasons: (i) in Choctaw not all patients are direct objects, and (ii) grammatical relations are most central to verb agreement and switch reference phenomena.

Although most NP arguments which bear only the semantic role of patient are initial direct objects in Choctaw, one notable exception is the verb illi 'die'. The subject of illi is marked by a nominative agreement morpheme, as in (i).

- (i) Ish-ill-a:-chĩ.
 2Nom-die-Irr-Fut
 'You will die.'

As discussed in §4 (cf. also note 14), intransitive clauses with nominative agreement marking the subject are unergative, i.e., the subject is a subject at all levels of structure. This pattern of unergativity also occurs in existential predicates. Unfortunately, I have no data to decide the issue of whether or not possessors of body parts which occur with such predicates can be referenced by verb agreement or switch reference morphemes.

In the Choctaw literature, the term patient has been used to describe accusative agreement (Nicklas 1972; Heath 1977; Jacob, Nicklas, and Spencer 1977). However, this use is somewhat misleading since it is neither the case that all accusative agreement morphemes reference patients nor that patients are referenced only by accusative agreement morphemes. In (ii) both the subject and the direct object are marked by accusative agreement morphemes.

- (ii) Chi-sa-yimmi.
 2Acc-1Acc-believe
 'I believe you.'

If accusative agreement were to mark only patients, one would have to

claim that both the initial subject 'I' and the initial direct object 'you' are patients in (ii). On the other hand, in (i) the patient is marked with a nominative morpheme and in direct object demotion clauses (cf. (14b), (15b), and (16b)) the patient is marked by a dative agreement morpheme.

REFERENCES

- Byington, Cyrus. 1870. Grammar of the Choctaw language, ed. by Daniel G. Brinton. Proceedings of the American Philosophical Society 11.317-67.
- Davies, William D. 1981a. Choctaw clause structure. Unpublished PhD. dissertation, University of California, San Diego.
- Davies, William D. 1981b. Choctaw switch reference and levels of syntactic representation. Linguistic Notes from La Jolla 9.
- Davies, William D. 1982. 2→3 retreat, the notion 'absolute', and levels of grammatical relations. Paper presented at the First Annual West Coast Conference on Formal Linguistics, Stanford University.
- Heath, Jeffrey. 1977. Choctaw cases. Proceedings of the Third Annual Meeting of the Berkeley Linguistics Society.
- Jacob, Betty, Dale Nicklas, and Betty Lou Spencer. 1977. Introduction to Choctaw. Durant, OK: Choctaw Bilingual Education Program, Southeastern Oklahoma State University.
- Langdon, Margaret and Pamela Munro. 1979. Subject and (switch-) reference in Yuman. Folia Linguistica 3.321-44.
- Marlett, Stephen A. 1981. The structure of Seri. Unpublished PhD. dissertation, University of California, San Diego.
- Nicklas, T. Dale. 1972. The elements of Choctaw. Unpublished PhD. dissertation, University of Michigan.
- Payne, Doris L. 1980. Switch-reference in Chickasaw. Studies in Switch-Reference, ed. by Pamela Munro. UCLA Papers in Syntax No. 8.
- Perlmutter, David M. 1978. Impersonal passives and the Unaccusative Hypothesis. Proceedings of the Fourth Annual Meeting of the Berkeley Linguistics Society.

Perlmutter, David M. and Paul M. Postal. 1978. The 1-Advancement
Exclusiveness Law. To appear in Studies in Relational Grammar 2,
ed. by David M. Perlmutter and Carol G. Rosen. University of
Chicago Press.