

# **Binding Theory and Switch-reference**

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## **1. Introduction**

Binding theory originates with the attempt to account for the interpretations of ordinary and reflexive pronouns. However, binding theory has also been extended to the analysis of a range of data beyond those that originally motivated it. Switch-reference, a grammatical phenomenon found in many Native American and Papuan languages, is one such domain.

In this paper, I will argue for three universal properties of switch-reference (hereafter SR) systems. First, SR is based upon the configurational properties of the sentence in which it appears; it is best explained through appeal to notions like  $\bar{A}$ -status and command rather than notions like argument or agency. Second, due to the configurational nature of SR, it is only found in subordinate clauses. Third, SR is always local and never long-distance. My arguments are based primarily on the Muskogean languages Choctaw and Chickasaw, but I believe that the properties described for these languages are characteristic of SR in general.

I will argue that these conclusions for SR systems have implications for the structure of binding theory. The interpretation of the pronominal data that originally motivated binding theory

has become more complex with the recognition of interactions between purely structural notions like command and more semantic notions like agency and logophoricity.

In my view, SR systems present a more pristinely structural system of binding relationships than that found in pronominal binding, and for this reason examination of SR is important for distinguishing structural from non-structural effects in binding theory.

## 2. Basic assumptions

A typical instance of SR is shown in the following Choctaw examples:

- 1) John-at abiika-haatokoo-sh ik-iiy-o-tok.  
John-NM sick-because-SS III-go-NEG-PT

‘Because John<sub>i</sub> was sick, he<sub>i</sub> didn’t go.’

- 2) John-at abiika-haatokoo-n ik-iiy-o-tok.  
John-NM sick-because-DS III-go-NEG-PT

‘Because John<sub>i</sub> was sick, he<sub>j</sub> didn’t go.’

In (1), the complementizer of the subordinate clause includes a SR marker indicating that the two clauses have the same subject (SS), while in (2) the subordinate clause is marked to show different subject (DS).

Finer (1984, 1985) analysed SR as an instance of A’-binding, treating the SS marker as an anaphor that must be bound by the Infl/Comp of the matrix clause, and the DS marker as a pronominal that must be free of this same Infl/Comp.<sup>1</sup> Since Infl (and according to Finer’s assumptions, Comp) bears the index of the subject of the matrix clause, the observed distribution

follows.

A slightly modified version of Finer's assumptions is shown in figure 1.

[Figure 1 not available in this PDF version]

This analysis requires a few assumptions about the operation of binding which should be made explicit. They include the following:

a.) Infl m-commands Comp because the first maximal projection set that dominates Infl also dominates Comp. M-command appears to be the relevant notion for SR binding, rather than c-command.

b.) The SR marker in Comp must bear the index of the *John*. I'll assume that it receives this index via Spec-Head agreement with Infl (or Agr), and that Infl is incorporated into Comp, bringing this index with it.

c.) The classic definition of governing category (Chomsky 1981) says that the minimal binding domain for an anaphor must include the anaphor, an accessible SUBJECT, and an item governing the anaphor. If there is no domain that contains both a SUBJECT and a governor, then the anaphor is free in its reference. However, under my assumptions the binding domain for a SR marker must be the smallest maximal projection containing the SR marker and a potential A'-antecedent. Since SR markers canonically occur in ungoverned positions, including governor in the definition of the binding domain would wrongly predict that they are free in reference.

However, the original motivation for stipulating the presence of a governor in the definition of binding domain was somewhat questionable. The inclusion was intended to derive the distribution of PRO from the binding theory (in what is generally called the PRO

theorem). Without discussing the controversy in any detail, it is sufficient to say here that there are several plausible alternatives to the binding-theoretic account of the distribution of PRO. I take the inclusion of governor in the definition of binding domains to be unnecessary, and the fact that SR markers appear in ungoverned positions is unproblematic.

These points are discussed in more detail in Broadwell (1990).

### **3. Universal properties of switch-reference**

#### **3.1 Switch-reference is configurational**

By virtue of being  $\bar{A}$ -anaphors, SR markers need not be bound by arguments; they are sensitive only to  $\bar{A}$ -status and command relationships. In particular, there is little evidence to support the view that SR is sensitive to notions like argument or agency.

In the Western Muskogean languages Choctaw and Chickasaw, SR interacts with a rule of Possessor Raising (PR) in a way that shows that the antecedent of a SR marker need not be an argument of the matrix clause. Possessor raising extracts the possessor of the subject of an intransitive verb and adjoins it to the sentence; the raised possessor then receives nominative case. (3) shows a Chickasaw sentence without PR; (4) shows the same sentence after PR has applied. The Chickasaw data come from Munro and Gordon (1982) and Carden, Gordon, and Munro (1982).

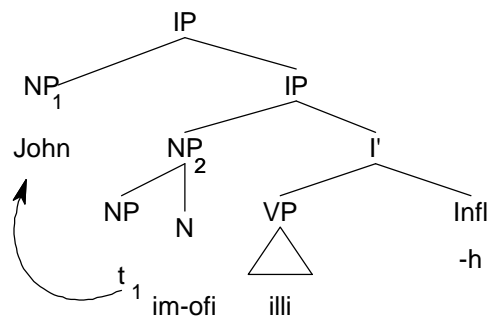
- 3) John im-ofi'-at illi-h.  
John III-dog-nom die-tns

'John's dog died.'

- 4) John-at ofi'(-at) im-illi-h.  
John-nm dog(-nm) III-die-tns

'John's dog died.'

I suggest that sentences like (4) have a structure like that shown in figure 2:



**Figure 1** The structure of possessor raising

Nominative case is assigned configurationally to the [NP,IP] position, so both NP<sub>1</sub> and NP<sub>2</sub> may be marked nominative.<sup>2</sup>

In favor of the structure shown, there is evidence (due originally to Carden, Gordon and Munro (1982)) that NP<sub>1</sub> and NP<sub>2</sub> form a constituent in (3) but not in (4). Adverb placement is one constituency test in Chickasaw. Adverbs may intervene between a raised possessor and the possessed noun, but they may not intervene between a non-raised possessor and the possessed noun:

- 5) Oblaashaash [John im-ofi'-at] illi-tok.  
yesterday John III-dog-NM die-PT

'Yesterday John's dog died.'

\*John oblaashaah im-ofi'-at illi-tok.

- 6) Oblaashaash [John-at] [ofi'-at] im-illi-tok  
yesterday John-NM dog-NM III-die-PT

✓John-at oblaashaash ofi'-at im-illi-tok.  
John-NM yesterday dog-NM III-die-PT

Sentences with both PR and SR are important for showing that binding of the SR marker is not limited to arguments of the matrix clause. Consider the following example:

- 7) John-at ofi'-at im-ambiika-tok  
John-nm dog-nm III-sick-pt

[sa-kisili-tokat]  
1sII-bite-when:ss

'John<sub>i</sub>'s dog<sub>j</sub> was sick when he<sub>i</sub>/it<sub>j</sub> bit me.'

*John* is not an argument of the matrix clause. However, it is among the potential antecedents of the SS marker in the subordinate clause, by virtue of appearing in an  $\bar{A}$ -position.

Crucially, if PR had not applied in (7), the interpretation of the sentence would be different:

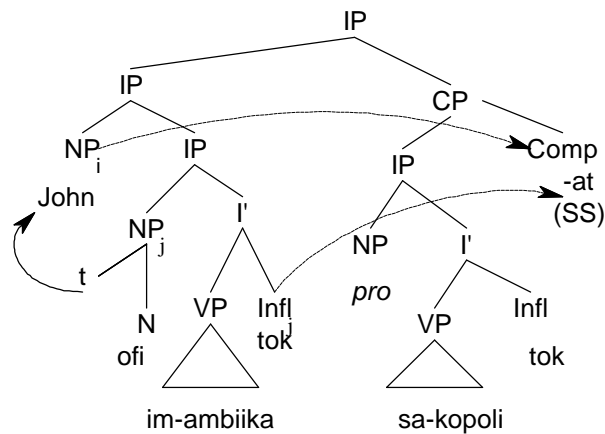
- 8) John im-ofi'-at abiika-tok  
John III-dog-NM sick-PT

[sa-kisili-tokat]  
1sII-bite-when:SS

`John(i)'s dog(j) was sick when it(j)/\*he(i) bit me.'

Because the possessor *John* is still contained within the subject, it is unable to c-command the SR marker in the adverbial clause, and the subject *John's dog* is the only possible antecedent for the SS marker.

Sentences like (7) have a structure like that shown in figure 3.



**Figure 2** Tree diagram for (7)

Sentences like these are problematic for approaches that treat SR data through an appeal to semantic notions like argument or agent.

Stirling (1993) is one such treatment. She gives a treatment of SR in which it is treated as “a kind of clause-level agreement, which normally marks the clause it occurs in as syntactically

and semantically dependent, and indicates whether there is continuity or discontinuity between the eventuality described by the marked clause and that described by the controlling clause.” (p. 123)

Stirling’s approach is couched within the framework of Unification Categorical Grammar, combined with Discourse Representation Theory. Within this approach, each clause is associated with a ‘structured eventuality index’ which contains three parameters: the Protagonist (defined as the agentive subject), the Actuality (realis or irrealis), and the Location. SS constrains the matrix and embedded clauses to agree in their eventuality parameters; DS indicates disagreement in at least one of the eventuality parameters.

However, Stirling’s claim that SS signals coreferentiality of agents cannot be maintained, since in sentences like (7), *John* is not the agent, or even an argument, of the matrix clause.

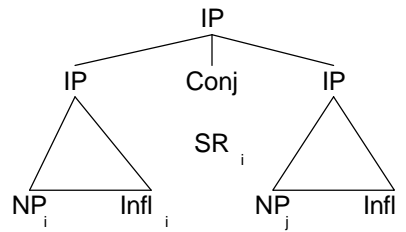
In general, approaches to anaphora which treat the reflexive as a valency-decreasing operation on predicates (Keenan 1987) or a function imposing a identity restriction on arguments of a predicate (Reinhart and Reuland 1993) do not extend easily to SR systems. SR is canonically a relationship between NPs associated with different predicates, and the Chickasaw evidence shows that SR markers need not even be bound by arguments.

In contrast to the predicate-based approaches to anaphora, a purely structural account in terms of command relationships extends naturally to the SR data.

### **3.2 Switch-reference requires m-command**

Configurations in which SR markers occur are limited to those in which the SR marker of a subordinate clause is m-commanded by an  $\bar{A}$ -position in the matrix clause; in particular, SR does not occur between coordinate clauses.

This is a crucial point in the analysis of SR. Several descriptions of SR data have suggested that SR markers occur in structures like that in figure 4. Roberts (1988) has argued for a structure of this sort in the Papuan language Amele, and claims that the appearance of SR markers in such a context is an argument against the binding theoretic treatment of SR.



**Figure 3** SR in a coordinate structure

In such a structure, the SR marker would bear the index of the first conjunct. Binding of the SR marker would be problematic if considered from a structural point of view. In general, we do not want command to hold between conjoined elements, given the ungrammaticality of examples like *\*I saw John<sub>i</sub> and himself<sub>i</sub>*.<sup>3</sup> Since the occurrence of SR in coordinate contexts presents for binding-theoretic approaches to SR, it is important to examine such cases. In this section, therefore, I will argue that the tree in figure 4 does not in fact represent the correct structure of sentences containing SR markers.

### 3.2.1 Clause chains in Choctaw

The Choctaw examples in (9) and (10) are instances of a construction often called ‘clause-chaining’. This is the most frequent environment for SR in Papuan languages, and clause chains are frequently analysed as coordination by researchers in that area.

Although Choctaw examples like (9) and (10) below are translated by coordination in

English, more careful analysis shows that the clause containing the SR marker is subordinate to the following clause (Linker 1987, Broadwell 1990).

- 9)            John-at hiilha-chah taloowa-tok.  
              John-NM dance:L-SS        sing-PT

‘John danced and sang.’

- 10)           John-at hiilha-nah taloowa-tok.  
              John-NM    dance:L-DS sing-PT

‘John danced and (someone else) sang.’

There are several pieces of evidence to suggest that /-chah/ and /-nah/ are not coordinating conjunctions in Choctaw. They contrast with true coordinating conjunctions in the following ways:

a.) The SR clause may not be independently marked for tense; truly coordinate clauses may be independently marked for tense:

- 11)           \* John-at    hiilha-tok-nah  
              John-NM    dance-PT-DS

Bill-at        taloow-aachih  
Bill-NM    sing-IRR

‘John danced and Bill will sing.’

12) John-at hilha-tok anoti  
John-NM dance-PT and

Bill-at taloow-aachih.  
Bill-NM sing-IRR

‘John danced and Bill will sing.’

b.) There is no Coordinate Structure Constraint effect for the SR clauses, but the effect is found with a true coordinate conjunction like *anoti*:

13) Katah-oosh<sub>i</sub> John-at taloowa-nah  
who-foc:nm John-nm sing:l-ds

t<sub>i</sub> hilhah?  
dance

‘Who<sub>i</sub> did John<sub>j</sub> sing and t<sub>i</sub> dance?’

14) \*Katah-oosh<sub>i</sub> John-at taloowa-tok  
who-foc:nm John-nm sing-pt

anoti t<sub>i</sub> hilha-tok?  
and dance-pt

(Who<sub>i</sub> did John<sub>j</sub> sing and t<sub>i</sub> dance?)

These examples show that despite the fact that Choctaw sentences with both *anoti* and SR markers are translated with ‘and’, there are real differences in the structures associated with them. We should be cautious about assuming coordinate structures in other languages based merely on the translation. I will suggest in the following section that despite the translations, the Amele sentences do not show true coordination.

### 2.2.2 Clause chains in Amele

Roberts (1988) is the most sustained attempt to defend an analysis of clause-chaining as coordination in a Papuan language.

His most convincing argument is the following: Clear cases of subordinate clauses show some flexibility in their order with respect to the main clause -- they may precede the main clause, follow the main clause, or occur between the subject and the predicate of the main clause, as shown in the following examples:

- 15) [Ho qo-qag-an nu]<sub>CP</sub>    dana age  
pig hit-3P-FUT purpose men    3P  
  
ho-ig-a.  
come-3P-PAST  
  
'The men came to kill the pig.'
- 16) Dana [ho qo-qag-an nu]<sub>CP</sub>    age  
men    pig hit-3P-FUT purpose 3P  
  
ho-ig-a.  
come-3P-PAST  
  
'The men came to kill the pig.'
- 17) [Ija ja    hud-ig-en fi] uqa sab    man-igi-an.  
I    fire    open-1S-FUT if 3S    food roast-3S-FUT  
  
'If I light the fire, she will cook the food.'
- 18) Uqa sab    man-igi-an [ija ja    hud-ig-en fi.]  
3S    food roast-3S-FUT I    fire open-1S-FUT if  
  
'She will cook the food if I light the fire.'

Clause-chains don't have the same freedom of occurrence: they must always precede the main

clause:

- 19) [Ho busale-ce-b] dana age qo-ig-a.  
pig run:out-DS-3S man 3P hit-3P-PAST  
‘The pig ran out and the men killed it.’
- 20) \*Dana [ho busale-ce-b] age qo-ig-a.  
man pig run:out-DS-3S 3P hit-3P-PAST  
‘The pig ran out and the men killed it.’
- 21) \*Dana age qo-ig-a [ho busale-ce-b].  
man 3P hit-3P-PAST pig run:out-DS-3S  
‘The pig ran out and the men killed it.’

### 3.2.3 The structure of Choctaw clause chains

Choctaw clauses in /-chah/ and /-nah/ show the same ordering restrictions discussed by

Roberts for Amele:

- 22) John-at hiilha-nah Bill-at taloowa-tok.  
John-NM dance:L-DS Bill-NM sing-PT  
‘John danced and Bill sang.’
- 23) *Center-embedded*  
\*Bill-at [John-at hiilha-nah] taloowa-tok.  
Bill-NM John-NM dance:L-DS sing-PT

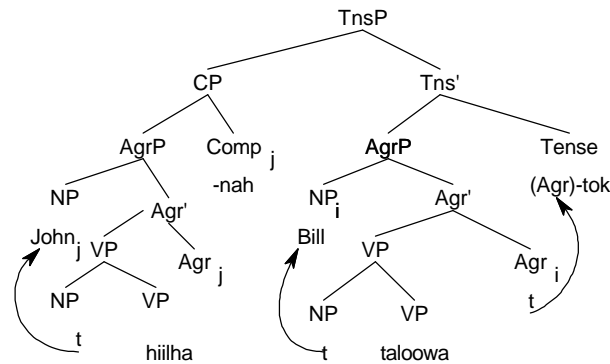
24) *Extraposed to the right*

\*Bill-at taloowa-tok     [John-at hiilha-nah]  
 Bill-NM sing-PT         John-NM dance:L-DS

I suggest that the key to understanding these clause-chaining structures in Choctaw and Amele lies in the nature of Tense in such sentences. Familiar instances of Tense can be thought of as predicates that take an event as argument, e.g. *Past* (kiss (pat, sandy)).<sup>4</sup>

What is distinctive about the clause chaining construction is that the clauses joined in this manner necessarily mirror their temporal order. This is obviously not true of ordinary adverbial clauses (*Because I am going to England, I have bought some guide books* vs. *Because I went to England last year, I will go again next year.*)

In clause chains, the Tense predicate is transitive, taking two events as arguments: *Precede* ((dance(john)), (sing(bill))). This results in a phrase structure like the following:



**Figure 4** The structure of clause chaining in Choctaw

Given this structure, several correct predictions follow:

a.) The first clause of the chain occurs in a [Spec, TP] position. It cannot occur to the right of the

second clause because right-edge specifier positions are unavailable in the language.

b.) The center-embedded construction is also unavailable since there is no position for the subject of the second clause (*Bill*) to move to.

c.) Given the lack of a Tns projection internal to either of the two events, it is impossible for them to have distinct tense specifications -- they are always interpreted with the same tense.

This structure also preserves the c-command relationship between the Agr/Tense of the main clause and the SR marker.

### 3.2.4 Clause chains and reflexive movement

Additional evidence for the posited structures come from reflexive movement.

In Choctaw, a reflexive subject of an embedded complement clause optionally moves onto the verb of the matrix clause:

25) John-at [ili-pisachokma-kat] anokfillih.  
John-NM RFL-goodlooking-SS think

‘John<sub>i</sub> thinks that self<sub>i</sub> is goodlooking.’

26) John-at [pisachokma-kat] il-anokfillih.  
John-NM goodlooking-SS RFL-think

‘John<sub>i</sub> self<sub>i</sub>-thinks that t<sub>i</sub> is goodlooking.’

(John<sub>i</sub> thinks that he<sub>i</sub> is goodlooking.)

I proposed in Broadwell (1988) that this rule of reflexive movement is the s-str reflex of the LF process suggested by Pica (1987) and others.

Reflexive movement only operates out of complement positions: not adjunct positions.

- 27) John-at (\*ili-)yaayah  
John-NM cry
- [*pro* sipokni-haatokoosh]  
old-because:SS
- ‘John (\*self-)cried because he is old.’

Therefore, reflexive movement is test for the complement status of a clause.

Choctaw has a few psychological verbs that select for complements with /-chah/ or /-nah/  
marking:

- 28) Pam-at noklhakacha-tok  
Pam-NM surprise-PT
- [Charles-at taloowa-nah]  
Charles-NM sing:L-DS
- ‘Pam was surprised that Charles sang.’

Such complements may appear either before or after the main verb (unlike the instances in clause chains):<sup>5</sup>

- 29) Pam-at [Charles-at  
Pam-NM Charles-NM
- taloowa-nah] noklhakacha-tok  
sing:l-DS surprise-pt
- ‘Pam was surprised that Charles sang.’

Reflexives may move out of such complement clauses:

- 30) Charles-at ili<sub>i</sub>-noklhakacha-tok  
Charles-NM RFL-surprise-PT  
[ t<sub>i</sub> abiika-chah].  
sick-SS  
‘Charles<sub>i</sub> was self<sub>i</sub>-surprised that t<sub>i</sub> got sick.’

However, reflexive movement out of the clause-chaining version of such clauses is ungrammatical:

- 31) John-at sipokni-chah  
John-NM old-SS  
(\*ili-)now-ahii-kiiyoh.  
(\*RFL-)-walk-POT-NEG  
‘John is old and can’t (\*self-)walk.’

On the account given here, the contrast between (30) and (31) reduces to a familiar subject/object asymmetry. The ungrammatical example in (31) is an attempt to move the reflexive out of the subject position of the chaining Tense.<sup>6</sup>

### 3. Variation in switch-reference systems

Observed variation in SR systems can be reduced to variation in just two areas: i.) the pronominal/disjoint anaphor distinction, and ii.) whether SR markers must be bound at s-str or whether binding at other levels is allowed.

### 3.1 DS as a pronominal vs. DS as a disjoint anaphor

The notion of *disjoint anaphor* was first introduced by Saxon (1984) in the description of the Athapaskan language Dogrib.

Consider the following examples:

- 32)            John ye-hk'e ha.  
               John 3dis-shoot fut  
  
               'John<sub>i</sub> is going to shoot him<sub>j, \*i</sub>'

/ye-/ , as a disjoint anaphor, must have an index distinct from that of the NP which c-commands it. It differs from a pronominal in occurring only in positions where a counterindexed antecedent is available. Thus the following instance in subject position is ungrammatical:

- 33)            \*?ekaani ye-enda.  
               thus     3dis-live  
  
               'He lives this way.'

We may implement the condition on disjoint anaphors as follows: A disjoint anaphor bearing the index  $i$  must be c-commanded by an NP bearing the index  $j$ , where  $i \neq j$ .

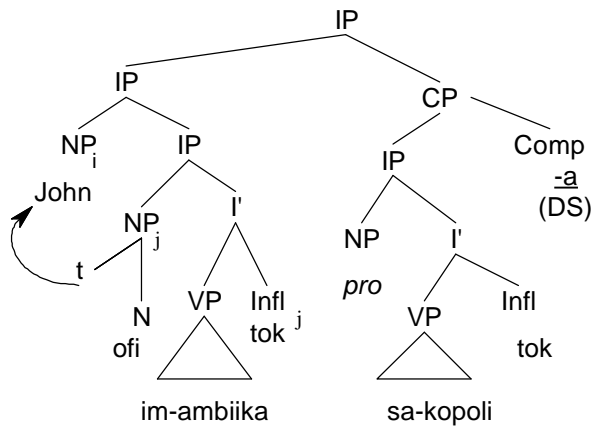
There is good reason to think that the Choctaw and Chickasaw DS marker is a disjoint

anaphor, rather than a pronominal.

Consider the following example:

- 34)       `John-at ofi'-at       im-ambiika-tok  
           John-nm dog-nm III-sick-pt  
  
           [sa-kisili-tok<sub>a</sub>]  
           1sg-bite-when:ds  
  
           'John<sub>i</sub>'s dog<sub>j</sub> was sick when he<sub>i</sub>/it<sub>j</sub> bit me.'

This sentence has a structure like the following:



**Figure 5** An example of DS marking in a possessor raising construction

If the DS marker were a pronominal, it would have to be free of all c-commanding antecedents.

However, a disjoint anaphor only needs to be c-commanded by one NP with a distinct index.

Since the *pro* subject of the embedded clause may be either ‘dog’ or ‘John’, the DS marker must be a disjoint anaphor.

However, other languages show evidence that DS markers are sometimes pronominals.

Consider the following example from Amele (Papuan)

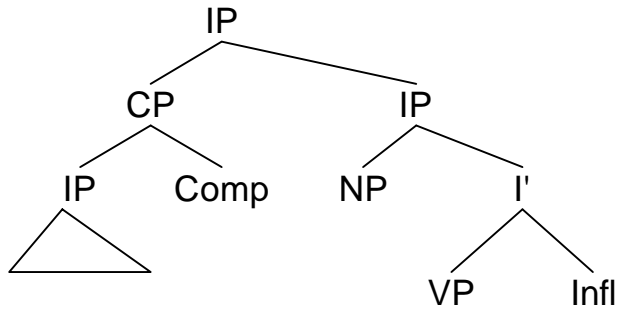
35)           Age ceta **gul-do-co-bil**  
              3p   yam **carry-3sO-DS-3pS**

              l-i       bahim na       tac-ein.  
              go-SS   floor on       fill-3pS:past

‘They carried the yams on their shoulder and went and filled up the yam store.’

DS marking in this context is unexpected. Consultants say that in such cases “something has changed” or “this is a new situation”.

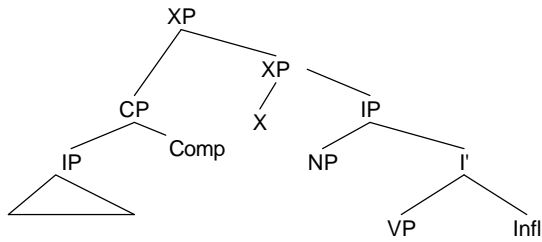
In the usual situation, we assume that adverbial clauses are adjoined directly to the matrix clause, as in the following figure:



**Figure 6** Typical configuration for SR marking of adverbial clauses

In such a configuration, the binding category for a DS marker typically extends into the matrix clause, assuming that Infl m-commands Comp. Therefore, a pronominal DS will need to be disjoint from  $\bar{A}$ -elements with the matrix IP.

However, the presence of a boundary stronger than that of adjunction would block command from Infl. In particular, adjunction to a matrix CP (rather than IP) would result in the ability of a pronominal SR marker to be free. Consider a structure like the following, where X = Comp (order irrelevant):



**Figure 7** Possible structure for anomalous DS examples in Amele

In such a configuration, Infl does not m-command Comp, and a pronominal in Comp is free to occur, even if coindexed with Infl.

Alternately, X in such a structure may be a null temporal or logical predicate or some other such functional element.

### 3.2 S-str binding

A second parameter of variation for SR systems is found in the level at which the SR markers must be bound. Most SR languages seem to require s-str binding. Some, however, show evidence for d-str or LF binding.

The agreement system of Choctaw distinguishes between types of agreement labelled I, II, III.<sup>7</sup> I is typically used for agentive subjects; II is used for the objects of transitives and subjects of unaccusatives:

- 36) Sa-pisah. 'He sees me'  
1sII-see
- Baliili-lih. 'I run.'  
run-1sI
- Sa-niyah. 'I'm fat.'  
1sII-fat

Despite the occurrence of object-like agreement on the subjects of unaccusative verbs, when an overt subject noun phrase appears it always takes the nominative case:

- 37) Anakoosh sa-niyah.  
I:nom 1sII-fat
- 'I am fat.'

These facts suggest an unaccusative analysis, where *I* originates as the object of *fat* at d-str, triggering agreement at that level. The NP then moves into subject position and receives nominative case.

For all the Choctaw speakers I have consulted, subjects of unaccusatives function like any other subject for the SR system:

- 38) Takkon laawa-ka aapa-chah niya-tok.  
apple lots-acc eat:1-SS fat-pt
- 'He ate lots of apples and got fat.'

However, Davies (1986) reports that for some speakers of Choctaw, unaccusative verbs license DS marking for subordinate clauses with coreferential subjects, as in the following example:

- 39) [John-at takkon aapa-nah] abiika-tok.  
 John-nm apple eat-ds sick-pt  
 ‘John ate the apple and got sick.’

The verb in the matrix clause is unaccusative, and because the subject is null at d-str, it is able to bind the DS marker in the embedded clause. However, most Choctaw speakers find examples like this ungrammatical, and all speakers prefer SS marking in this example. We may account for the diversity of judgments by claiming that some speakers of Choctaw allow binding of SR markers at either d-str or s-str, while others allow such binding only at s-str.

Languages such as Amele (Roberts 1987, 1988) may also show evidence for binding of SR markers at other syntactic levels. Amele has a construction described as the impersonal, as shown in the following example:

- 40) Ija wen te-Ø-na.  
 I hunger 1s-3s-pres  
 ‘I am hungry.’

The characteristic of this construction is that the experiencer NP appears first in the clause, followed by a NP which refers to a sensation or emotion. The appropriate object agreement for the experiencer is combined with 3rd singular agreement and the appropriate tense morpheme. There is no overt verb.

Roberts (1987:315ff) analyses the experiencer in such constructions as the object of the sentence, based on the fact that it triggers object agreement. However, there are two facts that suggest that this analysis may be mistaken.

First, the order shown above is invariant. If Roberts' analysis is correct and the experiencer is the object, then the obligatory word order for this construction is OSV, while the language is generally SOV.

Second, SR treats the experiencer as the subject in such constructions (Roberts 1987:300):

- 41)           Ija   b-i-m-ig           wen  
          I   come-up-1sgS-SS   hunger
- te-i-a.  
          1sO-3sg-past
- 'I came up and became hungry.'

If Roberts is correct in treating *hunger* as the surface subject of the second clause, then the SS marking is anomalous at s-str. We would need to posit an analysis where the experiencer NP occupies the subject position, presumably at LF.

However, the Choctaw data above show that the mere appearance of object agreement on a verb is no firm assurance that the coindexed argument is in an object position at s-str. Amele has no case-marking, but the word order may indicate that experiencers are indeed subjects of the impersonals which trigger anomalous object agreement.

## 5. Bibliography

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## Abbreviations and orthography

In the Choctaw examples, orthographic symbols have their standard phonetic values, except that <sh>=[ʃ], <ch>= tʃ], and <lh>=[ɬ]. Underlining shows vowel nasalization.

The Amele examples follow Roberts orthography. Note that <c>=[ʔ] and <q>=[g b].

The following abbreviations are used in the glosses: acc=accusative, caus=causative, ds=different subject, foc=focus, irr=irrealis, l=l-grade, neg=negative, nm=nominative, O=object, pot=potential, pl=plural, pres =

present, pt=past, S=subject, ss=same subject, tns=tense.

## Endnotes

1. Finer treats Infl/Comp as the joint head of  $\bar{S}$ . In what follows, I use Infl as an abbreviation for some number of functional projections (presumably including Tns and Agr) when the specific content of these projections is not relevant.

2. I will leave the question of the position of the III prefix on the verb open, since nothing in the argument here crucially relies on it. For one approach to the problem see Schütze (1994).

3. Multiple instances of a category in a conjoined structure appear to have a quite distinct status from the multiple instances that are the result of adjunctions. While m-command does extend into adjoined adverbial clauses, the available evidence seems to show that it does not extend into conjoined clauses.

4. If it is correct to say the the subject of an ordinary declarative sentence occupies the [Spec, TP] position, then we may view this as an instance of raising.

5. Rightward extraposition seems to be more frequent for these complement clauses than for ordinary complement clauses. I don't have an explanation for this fact.

6. Note, however, that the structure given for possessor raising earlier would also seem to involve movement out of a subject constituent. Some explanation must be given for the differential grammatical status of the two examples.

7. Some authors call these nominative, accusative, and dative, respectively. I avoid these terms since Choctaw has real case marking on noun phrases, and the I/II/III agreement on verbs need not match that on the noun phrase.