

1987

## Reflexive Movement in Choctaw

George Aaron Broadwell  
*University of California, Los Angeles*

Follow this and additional works at: <https://scholarworks.umass.edu/nels>



Part of the [Linguistics Commons](#)

---

### Recommended Citation

Broadwell, George Aaron (1987) "Reflexive Movement in Choctaw," *North East Linguistics Society*. Vol. 18 , Article 5.

Available at: <https://scholarworks.umass.edu/nels/vol18/iss1/5>

This Article is brought to you for free and open access by the Graduate Linguistics Students Association (GLSA) at ScholarWorks@UMass Amherst. It has been accepted for inclusion in North East Linguistics Society by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

REFLEXIVE MOVEMENT IN CHOCTAW

GEORGE AARON BROADWELL

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Choctaw, a Muskogean language spoken in Mississippi and Oklahoma, provides evidence for the Lebeaux's (1983) and Chomsky's (1986) proposal that anaphors move at Logical Form (LF), and in particular for Pica's (1987) proposal that long-distance anaphora is a consequence of successive cyclic movement.

In Choctaw, reflexives and reciprocals are verbal prefixes, as shown in the following examples:<sup>1</sup>

- 1a.) John-at ili-pisa-tok. 'John saw himself.'  
John-nm rfl-see-pt
- b.) Hattak-at itti-pisa-tok. 'The men saw each other.'  
man-nm rcp-see-pt

Although reciprocals have the same general properties as reflexives, I will focus on the properties of reflexives in this paper.

When the subject of a complement clause is coreferential with the subject of the matrix clause, there is optional reflexivization of the lower clause subject.

## GEORGE A. BROADWELL

- 2a.) John-at [pisachokma-kat] ikhanah.  
 John-nm goodlooking-comp:ss know

'John<sub>i</sub> knows that he<sub>i</sub> is goodlooking.'

- b.) John-at [ili-pisachokma-kat] ikhanah.  
 John-nm rfl-goodlooking-comp:ss know

'John<sub>i</sub> knows that self<sub>i</sub> is goodlooking.'

In these cases, the reflexive may also occur on the matrix verb. I will argue that the reflexive has moved from the lower verb to the higher verb.

- 3.) John-at [pisachokma-kat] il-ikhanah.  
 John-nm goodlooking-comp:ss rfl-know

'John self-knows that he is goodlooking.'

It is also possible to have the reflexive on both verbs.

- 4.) John-at [ili-pisachokma-kat] il-ikhanah.  
 John-nm rfl-goodlooking-comp:ss rfl-know

'John<sub>i</sub> self-knows that self<sub>i</sub> is goodlooking.'

In the case of (4), where the reflexive occurs on both clauses, I will assume that there is optional spell-out of the trace.

There are cases in which the reflexive moves up more than one clause. In the following example, **tahah** is an auxiliary verb meaning 'complete'. Used with adjectival predicates, it means something like 'really'.

- 5a.) John-at [[ili-sipokni-t] taha-hoosh] ikhanah.  
 John-nm rfl-old-t complete-part:ss know

- b.) John-at [[sipokni-t] ili-taha-hoosh] ikhanah.  
 John-nm old-t rfl-complete-part:ss know

- c.) John-at [[sipokni-t] taha-hoosh] il-ikhanah.  
 John-nm old-t complete-part:ss rfl-know

- d.) John-at [[ili-sipokni-t] ili-taha-hoosh]  
 John-nm rfl-old-t rfl-complete-part:ss

il-ikhanah. 'John<sub>i</sub> knows that self<sub>i</sub> is  
 rfl-know really old.'<sup>2</sup>

## REFLEXIVE MOVEMENT IN CHOCTAW

In this example, the reflexive may occur on the most deeply embedded predicate, the auxiliary verb, the matrix verb, or on all three verbs.

Another example of reflexive movement over more than one clause occurs in (6). In Choctaw, 'whether' complements are formed with a verb **nana** which means something like 'be a thing'. Thus the literal Choctaw translation of a sentence like 'John doesn't know whether it will rain' is 'John doesn't know if it is a thing that it will rain.'

- 6a.) John-at [[ili-sipokni-kma] nana-kat]  
 John-nm rfl-old-irr:ds whether-ss  
 ik-ikhaan-oh.  
 3N-know-neg
- b. John-at [[sipokni-kma] ili-nana-kat]  
 John-nm old-irr:ds rfl-whether-ss  
 ik-ikhaan-oh.  
 3N-know-neg
- c. John-at [[sipokni-kma] nana-kat]  
 John-nm old-irr:ds whether-ss  
 il-ik-ikhaan-oh.  
 rfl-3N-know-neg
- d.) John-at [[ili-sipokni-kma] ili-nana-kat]  
 John-nm rfl-old-irr:ds rfl-whether-ss  
 il-ik-ikhaan-oh.  
 rfl-3N-know-neg

'John<sub>i</sub> doesn't know whether self<sub>i</sub> is old.'

Two possible alternate analyses of these data can be immediately dismissed. The first possibility is that the sentences involve exceptional case marking. However, the subject of a clausal complement to 'know' is case-marked nominative in Choctaw, as shown below:

- 7.) John-at [Bill-at pisachokma-ka] ikhanah.  
 John-nm Bill-nm goodlooking-comp:ds know

'John knows that Bill is goodlooking.'

Further, the possibility of interclausal reflexives is unaffected by the tense/aspect of the complement clause.

## GEORGE A. BROADWELL

- 8a.) John-at [pisachokma-kat] ikhanah.  
 John-nm goodlooking-comp:ss know  
 'John<sub>i</sub> knows that he<sub>i</sub> is goodlooking.'
- b.) John-at [pisachokma-tokat] ikhanah.  
 John-nm goodlooking-pt:comp:ss know  
 'John<sub>i</sub> knows that he<sub>i</sub> was goodlooking.'
- c.) John-at [pisachokm-aachi-kat] ikhanah.  
 John-nm goodlooking-irr-comp:ss know  
 'John<sub>i</sub> knows that he<sub>i</sub> will be goodlooking.'

Thus the Choctaw data seem unrelated to exceptional case-marking in English.

A second possibility is that when reflexives occur on the matrix verb they are actually being treated as arguments of the main verb, in a manner analogous to constructions like 'John thought to himself'. This argument is falsified by the occurrence of reflexives on auxiliary verbs like 'complete' and 'be a thing'. It is difficult to imagine how the reflexive could be an argument of such a verb.

Further, the occurrence of reflexives on *is* is restricted to cases in which the subject of the complement clause is coreferential with the matrix. Thus the following sentence is ungrammatical:

- 9.) \*John-at [Bill-at pisachokma-ka]  
 John-nm Bill-nm goodlooking-comp:ds  
 il-ikhanah.  
 rfl-know  
 'John self-knows that Bill is goodlooking.'<sup>3</sup>

Some general processes of INFL movement in Choctaw provide insight into the specific process of reflexive movement. Let us re-examine (6) more closely. I said earlier that **nanah** is a verb used in the formation of 'whether' clauses. To be more explicit, I will assume that it has an expletive subject and takes a clausal complement. Thus a 'whether' clause has the following, more explicit, structure:

## REFLEXIVE MOVEMENT IN CHOCTAW

- 10.) John-at<sub>i</sub> [ e<sub>j</sub> [pro<sub>i</sub> sipokni-kma] nana-kat]  
 John-nm old-irr:ds whether-comp:ss

ik-ikhaan-oh.  
 3N-know-neg

'John doesn't know whether he is old.'

This example shows a peculiar pattern of switch-reference (SR) marking. The most deeply embedded clause is marked different subject (DS), since the expletive subject of 'whether' is different from the subject of 'be old'. However, in the middle clause, 'whether' has same subject (SS) marking. By the same reasoning used in the previous clause, we would expect it to have DS marking, since the expletive is different from 'John'.

This pattern of SR-marking is not restricted to the verb 'whether', but is also found with weather and environmental verbs. In Choctaw, verbs like 'dawn' can take a complement clause of duration, as in the following example:<sup>4</sup>

- 11.) John-at hihilha-nah onnah.  
 John-nm dance:hn-ds dawn

'John danced until dawn.'

When embedded, these clauses have the following pattern of SR:

- 12.) John-at [ e [pro hihilha-nah] onna-kat]  
 John-nm dance:hn-ds dawn-comp:ss

ikhanah.  
 know

'John knows that he danced until dawn.'

Again, we find that the most deeply embedded clause is marked DS, since the expletive is evaluated as different from the 'John'. Yet in the middle clause, we have SS marking.

I propose that in these examples the INFL of the most deeply embedded clause has been incorporated into the INFL of the clause above it, yielding the following D-str and S-str for the lower two clauses:

GEORGE A. BROADWELL

- 13.)  $[_{IP} [_{CP} [_{IP} INFL_i ] COMP] INFL_{\emptyset}]$  D-str  
 $[_{IP} [_{CP} [_{IP} t_i ] t_i] [_{I} INFL_i [INFL_{\emptyset}]] ]$  S-str

Direct movement of the reflexive from one INFL to another will be blocked by the Head Movement Constraint (Baker 1985, Chomsky 1986), and I will assume, following Pica (1987) that the movement uses COMP as an 'escape hatch' in a way similar to successive cyclic movement of WH-phrases.<sup>5</sup>

The derivation of the SR facts then proceeds as follows: at D-str, we compare the indexes of the two INFLs, and find that they bear distinct indices, so we mark the lowest clause DS. Then our rule of INFL-incorporation applies, and the intermediate INFL now bears the features of  $INFL_i$ . When we compare this INFL with the next higher INFL we find that the features are non-distinct, so we mark the clause SS.

The binding must then apply in a cyclic manner for these examples. In the lowest clause, we check for coreference, then apply our movement rule, then check the coreference relations in the next higher clause.

I stated earlier that this peculiarity of SR-marking is restricted to clauses with an expletive subject. I propose to capture this fact with a condition on INFL-incorporation along the following lines:

- 14.) Condition on INFL incorporation:  $INFL_i$  may be incorporated into  $INFL_j$  iff the features X contained in  $INFL_i$  are compatible with the features X of  $INFL_j$ , where X varies parametrically.

For current purposes, we can allow the notion 'compatibility' to await precise definition, so long as we assume that null features are compatible with specified features in the relevant respect.

There is further evidence for the rule of INFL-incorporation proposed above from the properties of tense/aspect marking in Choctaw. Consider the following example of a 'whether' clause in which the complement to 'whether' is marked irrealis:

## REFLEXIVE MOVEMENT IN CHOCTAW

- 15.) John-at [ e [pro sipokn-aachi-kma] nana-kat  
 John-nm old-irr-irr:ds whether-comp:ss

ik-ikhaan-oh.  
 3N-know-neg

'John doesn't know whether he will be old.'

In cases such as these, the tense/aspect marking may also occur on the 'whether' verb, or on both verbs:

- 16.) John-at [ e [pro sipokni-kma] nan-aachi-kat  
 John-nm old-irr:ds whether-irr-comp:ss

ik-ikhaan-oh.  
 3N-know-neg

'John doesn't know whether he will be old.'

- 17.) John-at [ e [pro sipokn-aachi-kma]  
 John-nm old-irr-irr:ds

nan-aachi-kat ik-ikhaan-oh.  
 whether-irr-comp:ss 3N-know-neg

'John doesn't know whether he will be old.'

The occurrence of tense/aspect marking on clauses higher than where it would logically be expected is important, since it shows that the distribution of tense/aspect markers parallels that of reflexives. It also shows us that movement of a lower clause INFL into a higher clause is necessary independent of the binding facts.

Just as INFLs may only be incorporated into a clause with an expletive subject, long-distance reflexives are licit only if the subjects of intervening clauses are expletive. (18) and (19) show that it is not possible to have long-distance reflexives over an intervening non-expletive subject.

- 18.) John-at [hattak-at ili-hossa-tok-ma] pisa-tok.  
 John-nm man-nm rfl-shoot-pt-ds/ac see-pt

'John<sub>i</sub> saw the man<sub>j</sub> that shot self<sub>j,\*i</sub>.'

- 19.) Pam-at ikh\_nah [ili-habli-li-toka].  
 Pam-nm know rfl-kick-1sI-pt:comp:ds

'Pam<sub>i</sub> knows that I<sub>j</sub> kicked self<sub>j,\*i</sub>.'



## GEORGE A. BROADWELL

The condition of INFL-incorporation given in (14) will rule these sentences out on the assumption that the indices *i* and *j* are incompatible with each other.

Some further evidence that long-distance reflexives involve movement comes from the impossibility of moving a reflexive out of an adjunct clause, as shown in the following examples:

- 20.) John-at (\*ili-)yaayah [pro sipokni-haatokoosh].  
 John-nm cry old-because:ss

'John (\*self-)cried because he is old.'

- 21.) John-at [pro sipokni-chah] (\*ili-)now-ahii-kiyoh.  
 John-nm old-ss walk-pot-neg

'John is old and can't (\*self-)walk.'

- 22.) John-at [pro sipokni-hmat] (\*ili-)abiika-billiyah.  
 John-nm old-when:ss sick-always

'Since he got old, John is (\*self-)sick all the time.'

If long-distance reflexives involve movement, then the ungrammaticality of these examples is due to the ECP. However, there is no reason to suppose that binding theory, of itself, should be sensitive to the distinction between governed and ungoverned clauses.

Another property of reflexives in Choctaw is that they may only have subjects as antecedents. This follows naturally from the account proposed here, since only the subject position will be able to c-command an anaphor in INFL.<sup>6</sup> (This is also noted by Pica 1987, and others.) Consider the following examples, which establishes the subject-only property:

- 23.) Pam-at Charles im-anooli-hmat ili-tasiboh miyah  
 Pam-nm Charles III-tell-ss rfl-crazy hsay

i-makah.  
 III-say

'Pam<sub>i</sub> told Charles<sub>j</sub> that self<sub>i,\*j</sub> is crazy.'

It is interesting that in causatives, both the causer and the causee may control the reflexive, supporting a syntactic account of the causative:

## REFLEXIVE MOVEMENT IN CHOCTAW

- 24.) Bill-at John-a il-achiifa-chi-tok  
Bill-nm John-ac rfl-wash-caus-pt

'John<sub>i</sub> made Bill<sub>j</sub> wash self<sub>i,j</sub>.'

Having established the basic analysis of Choctaw, let us briefly compare long-distance reflexives in Chinese and Icelandic. Both languages show that long-distance reflexivization may be sensitive to the features in the INFLs of intervening clauses, thus supporting a condition on the compatibility of features in INFL.

In Chinese, Tang (1986), as cited by Battistella (1987), shows that long-distance binding of third person subjects may be blocked by an intervening non-third-person subject:

- 25.) Zhangsan shuo Lisi hen ziji.

'Zhangsan<sub>i</sub> says Lisi<sub>j</sub> hates self<sub>i,j</sub>

- 26.) Zhangsan zhidao wo juede Lisi dui ziji mei  
xinxin.

'Zhangsan<sub>i</sub> knows I<sub>j</sub> thought Lisi<sub>k</sub> had no confidence in self<sub>k,\*i,\*j</sub>.'

In Icelandic, the proper analysis of the requirements for long-distance reflexives is more controversial, but is related to the subjunctive mood (Thrainsson 1976) or sequence of tense (Anderson 1982), both of which are features indexed in INFL. The following example from Anderson (1982) shows that a long-distance reflexive is blocked by an intervening verb in the indicative:

- 27.) Jon segir að Maria viti að Haraldur vilji  
John says that Mary knows:subj Harold wants:subj

að Billi meiði sig.  
that Bill hurt:subj self

'John<sub>h</sub> says that Mary<sub>i</sub> knows that Harold<sub>j</sub> wants

Bill<sub>k</sub> to hurt self<sub>h,i,j,k</sub>.'

## GEORGE A. BROADWELL

28.) Jon segir að Maria viti að Haraldur vill  
 John says that Mary knows:subj Harold wants:ind

að Billi meiddi sig.  
 that Bill hurt:subj self

'John<sub>h</sub> says that Mary<sub>i</sub> knows that Harold<sub>j</sub> wants Bill<sub>k</sub>  
 to hurt self<sub>k,\*h,\*i,\*j</sub>.'

Clearly there are many complications in the analysis of these languages, and in the analysis of long-distance reflexivization in general. However, the striking fact that three unrelated languages show sensitivity to the content of INFLs between the antecedent and the anaphor suggests that an approach which uses INFL-movement, along with a feature compatibility requirement like (14), is on the right track.

## NOTES

I would like to thank Noam Chomsky, Jane Grimshaw, Kyle Johnson, Hilda Koopman, Pamela Munro, David Pesetsky, Dominique Sportiche, and Tim Stowell for helpful comments and suggestions. Special thanks are due to Josephine Wade, who provided the Choctaw data discussed here.

1. It is unclear whether it is best to regard these anaphoric prefixes as clitics binding a trace in an argument position or as a type of agreement with a null object. For the sake of concreteness, I will assume the clitic analysis in this paper, though little relies crucially on this.

2. The verbs in the most deeply embedded clauses have a suffix *-t*. Munro (1983) has discussed this suffix in detail and shown that it is a relic same subject marker which no longer alternates with a different subject marker.

*-t* is used on the first of two verbs when there is a particularly close temporal or logical connection between them, as in the following examples.

a.) Taloowa-t aya-tok. 'He went along singing.'  
 sing-t go-pt

b.) Bashli-t kinaffi-tok. 'He cut it down.'  
 cut-t fell-pt

## REFLEXIVE MOVEMENT IN CHOCTAW

3. Jane Grimshaw has pointed out to me that a similar restriction applies to the English sentences ?John thinks of himself that he is intelligent vs. \*John thinks of himself that Bill is intelligent. Although the source of this restriction in English is unclear, it might also apply to Choctaw.

However, even if this argument can be made to work, the evidence of reflexives occurring on auxiliaries is sufficient to show that reflexive movement must occur.

4. I thank Pamela Munro for pointing out the importance of these examples.

5. It seems that the Head Movement Constraint should also force movement to the Verb as well. If, as is often assumed, it is not possible to adjoin to a head and move on, leaving a trace (Chomsky 1986), then the theory makes a prediction about Choctaw which doesn't seem true on any obvious level -- that long-distance reflexives must drag the verbs of intermediate clauses along with them as they move to the matrix clause. There are several ways in which the constraints could be weakened slightly to allow the Choctaw case.

6. Given that there are connectivity effects associated with the movement of XPs containing an anaphor, we might expect to find connectivity with X<sup>0</sup> movement as well, particularly if the anaphor leaves traces in the C<sup>0</sup> and V positions. However, to the best of my knowledge there are no such effects in Choctaw.

The explanation for this will require further research.

## REFERENCES

- Anderson, Stephen. 1982. Types of dependency in anaphora: Icelandic (and other) reflexives. Journal of Linguistic Research 2:1-22.
- Baker, Mark. 1985. Incorporation: a theory of grammatical function changing. MIT PhD thesis.
- Battistella, Edwin. 1987. INFL, Abstract AGR, and Chinese Anaphora, abstract for alternate paper, NELS 18.
- Chomsky, Noam. 1986. Knowledge of Language. New York: Praeger.

GEORGE A. BROADWELL

- Lebeaux, David. 1983. A distributional difference between reciprocals and reflexives, in Linguistic Inquiry 14.4
- Munro, Pamela. 1983. When 'same' is not 'not different', in John Haiman and Pamela Munro, eds. Switch-reference and universal grammar. Amsterdam: John Benjamins.
- Pica, Pierre. 1987. On the nature of the reflexivization cycle, in Proceedings of NELS 17.
- Tang, Jane. 1986. Chinese reflexives, LSA Institute Chinese Syntax Workshop.
- Thrainsson, Halldor. 1976. Reflexives and subjunctives in Icelandic, in Proceedings of NELS 6.