Postverbal DPs in Hocąk as Rightward Scrambling*

Bryan Rosen (bdrosen@wisc.edu)
University of Wisconsin–Madison

1 Introduction

This paper examines data from Hocąk (Siouan) concerning the syntax of postverbal DPs. Previous cross-linguistic research has primarily argued that postverbal constituents are derived either via remnant VP movement (Bhatt and Dayal 2007, Hindi-Urdu) or by movement of an independent DP (Kural 1997, Turkish; Ko and Choi 2009, Korean; Manetta 2012, Hindi-Urdu).

Unmarked word order in Hocąk is verb-final, as in (1). However, Hocąk has relatively free word order: phrases can appear to the left or the right of their canonical position. A leftward moved DP is associated with a focus interpretation (2a), while a rightward moved DP is associated with a discourse-old or "backgrounded" interpretation (2b). In this paper, I argue postverbal DPs are instances of rightward scrambling, *i.e.* discourse-driven movement of individual DPs. This analysis supports the type of movement posited in Manetta 2012.[1]

(1) wijukra šųųkra haja
cat.DEF dog.DEF 3S.see
'The cat saw the dog.'

(2) a. ważątirera, hinųkra ruwį
car.DEF woman.DEF 3S.buy
'The car, the woman bought (it).'

b. hinųkra ruwį, ważątirera
woman.DEF 3S.buy car.DEF
'The lady bought something, the car'

Word order is crucial to disambiguate the subject from the object: the first argument is interpreted as the subject. In (3), the first interpretation of the sentence (although pragmatically unlikely) is the only one with neutral intonation; however, the second interpretation is only possible if there is a pause after 'car'.

(3) ważątirera hinųkra ruwį.
car.DEF lady.DEF 3S.buy
'The car bought the lady.' OR 'The car, the lady bought (it).'

For the purposes of exhibition, I represent Hocąk as SOV underlyingly. However, I predict that my analysis could be modified to fit an antisymmetric account (Kayne 1994).

* I am grateful to my Hocąk consultant (Cecil Garvin) for teaching me about his language. Thanks also to Meredith Johnson for continuous thoughtful discussion and support, and Iren Hartmann for providing her Lexique Pro Hoocąk dictionary.

[1] Abbreviations in Hocąk examples: > = subject acting on object; ACT = active; AUX = auxiliary; DECL = declarative; DEF = definite; INDEF = indefinite; S = singular; PL = plural; POS = positional.

2 Postverbal DPs and Rightward Scrambling in Hocąk

In Hocąk, any number of DPs may appear to the right of the verb, in any order, as illustrated in (4) below.

(4) a. šųųkra hoxataprookeeja haja, wijukra O V S
dog.DEF in.the.woods 3S.see cat.DEF
'The cat saw the dog in the woods.'

b. wijukra hoxataprookeeja haja, šųųkra S V O
cat.DEF in.the.woods 3S.see dog.DEF
'The cat saw the dog in the woods.'

c. hinųkra wiiwagaxhižą hok'ų, wąąkra S DO V IO
woman.DEF pencil.INDEF 3S.give man.DEF
'The woman gave the man the pencil.'

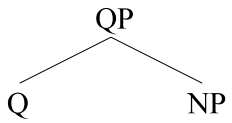
d. wiiwagaxhižą hok'ų, hinųkra, wąąkra DO V S IO
pencil.INDEF 3S.give woman.DEF man.DEF
'The woman gave the man the pencil.'

Three types of evidence suggest postverbal DPs arrive postverbally via rightward scrambling. *First*, short leftward movement can strand quantifiers (as in (5b)). Quantifiers can also be stranded when a DP is moved rightward (6a). I assume the structure of a quantified phrase (6b).

(5) a. *Base order: S O-Q V*
wijukra **šųųkra hanąąc** waaja
cat.DEF dog.DEF every 3S>3PL.see
'The cat saw every dog.'

b. *Leftward movement: O S t-Q V*
šųųkra wijukra **hanąąc** waaja
dog.DEF cat.DEF every 3S>3PL.see
'The cat saw every dog.'

(6) a. *Postverbal: S t-Q V O*
wijukra **hanąąc** waaja, **šųųkra**
cat.DEF every 3S>3PL.see dog.DEF
'The cat saw every dog.

b. 

(cf. Bresnan 1973, Manetta 2012)

The *second* piece of data deals with locative expressions. In (7), the locative *hoxataprookeeja* 'in the woods' obligatorily modifies the object 'dog'. The locative takes scope over the object regardless if it is in neutral position between the object and the verb (7a) or in a fronted position (7b). Remarkably, all postverbal arguments are within the scope of the locative, as shown in (8).

(7) a. wijukra šųųkra hoxataprookeeja haja
cat.DEF dog.DEF in.the.woods 3S.see

b. hoxataprookeeja wijukra šųųkra haja
in.the.woods cat.DEF dog.DEF 3S.see
= 'The cat saw [the dog in the woods].'
≠ '[The cat in the woods] saw the dog.'

(8) a. šųųkra hoxataprookeeja haja wijukra
dog.DEF in.the.woods 3S.see cat.DEF
'[The cat in the woods] saw [the dog in the woods].'

b. wijukra hoxataprookeeja haja šųųkra
cat.DEF in.the.woods 3S.see dog.DEF
'The cat saw [the dog in the woods].'

Third, Hocąk, like all Siouan languages, is a *wh*-in-situ language (as in (9a)). In (9b), the *wh*-expression has been moved leftward. Both allow for normal question interpretations.

(9) a. hinųkra **jaagu** ruwį
lady.DEF what 3S.buy
'What did the lady buy?'

b. **jaagu** hinųkra ruwį
what lady.DEF 3S.buy
'What did the lady buy?'

A *wh*-expression that occurs to the right of the verb cannot be interpreted as a normal question; it is interpreted as a second question. This is shown in (10) for *peežega* 'who'.

(10) a. waši, **peežega**?
3S.dance.ACT who
'Did someone dance? Who?'

b. wažątirehižą ruwį, **peežega**?
car.INDEF 3S.buy who
'Did someone buy a car? Who?'

To formalize postverbal DPs in Hocąk, I largely follow Manetta's (2012) analysis of rightward scrambling in Hindi-Urdu. She suggests that rightward scrambling is a probe-goal relationship driven by an EPP feature. The probe in T will agree with the most prominent accessible goal, which moves rightward to satisfy the EPP. The derivation proceeds in two steps: first there is rightward movement of the argument to Spec,TP; and then the argument obligatorily reconstructs at LF. My analysis departs from Manetta's in that the probe is in C rather than T, and thus postverbal arguments move to Spec,CP. This is illustrated in (11) for the example in (1b). As a consequence of following Manetta (2012), I also adopt the notion that rightward scrambling receives a parallel account to leftward scrambling in that movement is optional.

(11) *Base order: SOV*
$[_{vP}$ wijukra $[_{VP}$ šųųkra haja$]$ v$]$

i. *Rightward scrambling of subject to Spec,CP: OVS*
$[[_{TP}$ $[_{vP}$ t_S … šųųkra$]$ haja (T)$]$ wijukra$_S$$]$

ii. *LF representation following reconstruction: SOV*
$[_{TP}$ $[_{vP}$ wijukra $[_{VP}$ šųųkra V $]]$ haja (T)$]$

There is evidence that suggests that postverbal arguments move to Spec,CP. Hocąk has a declarative morpheme *-šąną* that sits in C (see also Boyle 2007 for Hidatsa). Postverbal DPs must appear to the right of the *-šąną* (13). The object in (13a) is thus in Spec,CP.

(12) wijukra suukra haja wa'unąk**šąną**
cat.DEF dog.DEF 3S.see AUX.POS.DECL
'The cat is seeing the dog.'

(13) a. wijukra waaja wa'unąk**šąną**, šųųkra hanąąc
cat.DEF 3S>3PL.see AUX.POS.DECL dog.DEF every
'The cat is seeing every dog.'

b. *wijukra waaja wa'unąk, šųųkra hanąąc**šąną**
cat.DEF 3S>3PL.see AUX.POS dog.DEF every.DECL
'The cat is seeing every dog.'

The analysis in (11) explains the distribution of postverbal DPs. (i) Given the structure of a quantified phrase in (6b), the word order in (6a) is expected since arguments can move rightward independently, akin to leftward movement. (ii) By assuming that each rightward-moved DP is obligatorily reconstructed (cf. 11ii), we can derive the locative scope facts. I argue that locatives take scope over *v*P, and that subjects move to Spec,TP in SOV orders; thus, reconstructed arguments (subjects/objects) are obligatorily modified by the locative. (iii) Postverbal question words are interpreted as a separate question. This restriction on *wh*-words makes sense if the right edge is reserved for discourse-old DPs. *Wh*-words by definition cannot be discourse-old. Finally, I predict that an analysis based on Multiple Move (Hiraiwa 2010) or Attract-All (Bošković 1999) could be extended to account for multiple postverbal arguments, as in (4d).

3 Cross-linguistic Implications

The evidence presented here supports an analysis in which postverbal DPs arrive in their surface position by rightward movement. Postverbal arguments in verb-final languages are not unique, as Japanese, Hindi, Korean, and Turkish are known to allow such constructions.

Bhatt and Dayal (2007, Hindi-Urdu) argue that postverbal DPs are derived via rightward movement of a remnant VP, which adjoins to a projection above the verb. With the evidence from Hocąk, it is unclear how a backgrounded interpretation would be assigned in a remnant VP. Moreover, this account would not account for the stranded quantifier example in (6a).

Kural (1997) shows that the LCA is unable to account for scopal properties of postverbal constituents in Turkish. Postverbal arguments arrive in their surface position by rightward scrambling to Spec,CP. Similarly, Ko and Choi (2009, Korean) propose an economy-based approach based on Fox (2000), whereby postverbal arguments move rightward to Spec,*v*P. As the example in (13b) shows, postverbal DPs sit in Spec,CP, which suggests that Turkish and Hocąk pattern to the exclusion of Korean.

Selected References

Bhatt, Rajesh, and Veneeta Dayal. 2007. Rightward scrambling as rightward remnant movement. *LI* 38:287–301. **Boyle, John P**. 2007. *Hidatsa Morpho-syntax and Clause Structure*. University of Chicago dissertation. **Chomsky, Noam. 2001**. Derivation by phase. *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press. **Fox, Danny**. 2000. *Economy and semantic interpretation*. MIT Press. **Kayne, Richard**. 1994. *The antisymmetry of syntax.* Cambridge, MA: MIT Press. **Ko, Heejeong, and Jae Young Choi**. 2009. Rightward movement and output economy. Poster presented at the 11th Seoul International Conference on Generative Grammar. **Kural, Murat**. 1997. Postverbal constituents in Turkish and the Linear Correspondence Axiom. *LI* 28:498–519. **Manetta, Emily**. 2012. Reconsidering rightward scrambling: Postverbal constituents in Hindi-Urdu. *LI* 43:43–74.