Functional Heads, Directionality, and the Identity of Omaha-Ponca Constituents

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SSILA 2002, San Francisco

Omaha-Ponca, like other Siouan languages, is strongly right-headed. This generalization is particularly true under a view of syntax in which most (or perhaps even all) constituents are headed by a functional element. Thus, Omaha-Ponca has Postpositional PPs (several examples are shown in (1)), Determiner-final DPs (shown in (2), as well as inside the brackets in (1b,c)), and clauses which end in a variety of auxiliaries, evidentials, and complementizer-like illocutionary force elements, presumably Inflection-final IPs or Complementizer-final CPs or something similar -- NegP, AspP, MoodP, etc. The clause-final elements shown in (3) include question, imperative, and negative particles, aspectual morphemes, person-marked progressive auxiliaries, and a subordinator. In (3) notice also that the projection below this inflectional or complementizer-phrase (possibly VP?) always has the verb at its right edge. Adverbial clauses are headed by a final adverbial subordinator, as shown in (4):

1. [[   ] P]$_{PP}$

      a. [tí] **ata**   b. [uxpúzhe kʰe] **di**   c. [umóⁿthiⁿka házhi tʰe] **ditʰoⁿ**
        house at   cupboard the in   year   last the from
        'at home'   'in the cupboard'   'since last year'

2. [[   ] D]$_{DP}$

      a. [wa'ú] **ama**   b. [áⁿpʰaⁿ núga zhíⁿga] **wiⁿ**   c. [gá] **akʰa**   d. [uthúthe gthiⁿ]**thiⁿkʰe**
        woman the   elk male small a   that the   stuck   sit   the
        'the woman'   'a small male elk'   'that one'   'the one who was stuck'

3. [[   ] I]$_{IP}$ / [[   ]C]$_{CP}$??   More elaborated clause structure is very roughly:

      [[[[[[(XP) (XP)(XP) V]$_{VP}$ Asp]$_{AspP}$ Mood]$_{MP}$ Neg]$_{NegP}$ Evid]$_{EvP}$ Illoc]$_{IcP}$...

      a. [[Ti   ata] niⁿ] **a**?   b. [Oⁿ'í]=**ga**!
        house in   ²be Q   give¹=imp
        'Are you in the house?'   'Give (it) to me!'

      c. [Wabthítʰoⁿ]=**m**=**azhi**.   d. [[Pahóⁿga ditʰoⁿ] noⁿzhíⁿ]=**tʰe**.
        ¹work=¹aux=neg   old-days from ³stand=evid
        'I'm not working.'   'It is from the old days.'

      e. [[Eóⁿbaha] anoⁿzhiⁿ]=**ta**=**miⁿkʰe**   f. [Bthe]=**noⁿ**=**moⁿ**
        m.c.   ¹stand=fut=¹aux   ¹go=usu=¹aux
        'I'm going to be master of ceremonies.'   'I usually go.'

      g. [[Águdi gthiⁿ] **tʰe**] ishpahoⁿ?
        where ³sit   C ²know
        'Do you know where she's staying?'

4. [[   ]Adv]$_\text{AdvP}$

    a. [thashto^{n}be] **go^n**   b. [o^{n}zhi^{n}ga] **t^{h}e di**   c. [agthí]   **ki**

       ^{2}see   having ^{1}small   when ^{1}arrive-home   when

       '(you) having seen it'   'when I was small'   'when I got home'

There are a few apparent or at least possible exceptions to the right-headedness generalization. One is the position of agreement. Person markers are prefixed to the verb rather than following it as one might expect if, as has been suggested for various European languages, they head an Agr phrase. A few examples are given in (5) with prefixes boldfaced and separated by hyphens for clarity.

5. person prefix + verb =   ??   Left headed [Agr [   ]]$_\text{AgrP}$???

    a. **a**-tí   **tha**-tí   **o^n**-tí

       ^{1}live ^{2}live ^{4}live

       'I live'   'you live'   'we live'

    b. **a-wa**-no^n'o^n **o^n-thi**-no^n'o^n **tha-wa**-no^n'o^n

       $^{1/pl}$hear $^{4/2}$hear $^{2/pl}$hear

       'I hear them'   'we hear you'   'you hear them/us'

Another apparent exception is that nouns precede their modifiers rather than following them as one might expect if they head NP. (6) shows several examples of what look like left-headed noun phrases.

6. noun + modifier =   ??   Left headed [N [   ]]$_\text{NP}$???

    a. **wa'ú** no^{n}bá   b. **taxti** zhi^{n}gá   c. **i^{n}shtá** thithíta

       woman two   deer small   eye   your

       'two women'   'fawn'   'your eye'

In this paper I argue that the cases in (5 and 6) are in fact not exceptions; they are actually right-headed structures. Seeing them as right-headed not only makes the language look more consistent; it illuminates other aspects of the syntactic structure of Omaha-Ponca.

Let's look first at the verb prefixes. One approach would be simply to say that these prefixes are all morphological rather than syntactic entities, and their order or placement within the word has no relevance to questions of syntactic headedness or directionality. This approach may very well be right. In particular, it gains some credence from the existence of a few fused forms, such as the portmanteau <u>wi</u> 'I-to-you' in (7). It also deals easily with the whole range of other verb prefixes, including instrumentals, dative and reflexive prefixes, and a valency-changing/case absorbing prefix <u>wa</u>.

7. **wi**'í

     $^{1/2}$give

     'I give to you'

However, another approach also seems worth considering, and is potentially more interesting. This involves positing that the person and other prefixes on verbs are pronominal arguments. As arguments, they are placed in relation to the head which selects them (namely, the verb), and their position is exactly as expected, before this

head. The first form in (5b) would then have the structure in (8), with two pronominal arguments placed before the verb no^n'o^n, which heads a verbal constituent of some type. I've labelled this constituent V', just to call it something; not claiming any theoretical status for the term.

8. [[a]$_{pronoun}$-[wa]$_{pronoun}$ -**no^n'o^n**]$_{V'}$
     1   pl   hear
    'I hear them'

This analysis of verbs and their prefixes remains rather speculative. But turning to the Noun Phrase structures in (6), we can make a much stronger and more secure argument for a right-headed structure. Nominal phrases, when looked at more carefully, quite clearly have a structure something like (9), with each modifier heading a right-headed phrase.   It's vanishingly rare for all the functional heads to be filled in; a somewhat artificial but acceptable example is given in (9b).

9.a.   [[[[[N]$_{NP}$ V]$_{VP}$ Quant]$_{QP}$ Poss]$_{PossP}$ Dem]$_{DemP}$ D]$_{DP}$

  b.   [[[[[shi^{n}nuda]$_{NP}$ sabe]$_{VP}$ no^{n}ba]$_{QP}$ thithita]$_{PossP}$ she]$_{DemP}$ ama]$_{DP}$
        dog   black   two   your   those   the
    'those two black dogs of yours'

What are the arguments for this structure? First, notice that some post-nominal modifiers are clearly verbs. Words that translate into English as adjectives are stative verbs in Omaha-Ponca, taking patient prefixes for subject person/number. When modifying a noun, they have the zero third person prefix. Zhi^{n}ga 'small' in (6b) is a stative verb; more examples are shown in (10). The form to^{n}ga in (10a) is identical to the third person in (10b); the other persons have non-zero prefixes, shown in (10c). Similarly snéde in (10d-f)

10.a. ké **tó^{n}ga**   b. tó^{n}ga   c. o^{n}tó^{n}ga / thitó^{n}ga / wat́o^{n}ga
    turtle big ^{3}big ^{1}big ^{2}big ^{4}big
    'big turtle' (snapper)   '(he/she/it is) big'   'I am big / you are big / we are big'

  d. hó^n **snéde**   e. snéde   f. o^{n}snéde / thasnéde / wasnédai
    night long ^{3}long ^{1}long ^{2}long ^{3}long
    'long night'   '(he/she/it is) long/tall'   'I am tall / you are tall / we are tall'

The structure of phrases like táxti zhi^{n}gá, ké tó^{n}ga, and hó^n snéde is arguably a verb phrase, as in (11a), or actually a sentence.   The same phrase can also have a predicational meaning: (a certain) deer is small. This verbal phrase can be followed by an article to form a DP; this is exactly the same structure as relative clauses, which in Omaha-Ponca consist of a sentence with indefinite noun head followed by an article. An example with an active verb (zho^n 'sleep') is given in (11c).

11.a. [[táxti] zhi^{n}gá]$_{VP}$
     deer   small
    'small deer'/'deer is small'

b. [[[táxti] zhi^{n}gá]$_{VP}$ ak^{h}a]$_{DP}$ c. [[[táxti] zho^n]$_{VP}$ ak^{h}a]$_{DP}$
    deer small   the   deer sleep   the
   'the small deer'/'the deer which is small'   'the deer which is sleeping'

This essentially claims that at least some nominal phrases are actually verb phrases, or perhaps better, that there is no distinction in syntactic type between nominal and verbal phrases in Omaha-Ponca. There are good reasons to think that this is not at all an unreasonable claim.   In particular, all of the words traditionally treated as articles (translated "the" in the examples in this paper) just happen to be homophonous with particles which have clause-final functions-- evidentials, in the case of the inanimate "articles"; quotatives and auxiliaries for the others, as roughly sketched in table (12). One of the perennial problems in Siouan syntax is why NP-final and clause-final particles seem to be the same set of forms; the claim that noun phrases and clauses are non-distinct constituent types goes a long way toward answering the question, though problems certainly remain.

12.   "articles"   DP function   clausal function

"articles"	DP function	clausal function
k^{h}e t^{h}e tho^n ge	inanimate	evidential
akha ama	animate proximate	auxiliary quotative
t^{h}o^n thi^{n}k^{h}é ma thi^n	animate obviative	auxiliary

What about the other noun modifiers? Not all are verbs, but at least some besides the canonical stative verbs can be predicational. For instance, possessives do not inflect with person prefixes, to the best of my knowledge, but they can occur both within the nominal phrase, as in (13a) and as the predicate of a sentence, as in (13b). It is only a very small leap to see those within the DP also as predicates, perhaps best thought of as a type of relative clause ('the dog which is mine').

13.a. [shí^{n}nuda wiwíta thi^{n}k^{h}e]$_{DP}$ b. [Shí^{n}nuda thi^{n}k^{h}e]$_{DP}$ wiwíta.
    dog   my   the   dog   the   my
    'my dog'   'The dog is mine.'

Quantifiers, including numerals, also occur both within and outside DP. In (14a) nó^{n}ba 'two' is a modifier within DP, while in (14b) it takes a DP as its complement and forms a larger quantifier phrase.   So both possessives and quantifiers function not only as noun modifiers, but also as elements which are in some sense predicational; phrases like shi^{n}nuda wiwita or sho^{n}ge no^{n}ba can reasonably be seen as simultaneously nominal and clausal, just like taxti zhi^{n}ga, with the noun as complement rather than head of the phrase.

14.a. [shó^{n}ge nó^{n}ba ak^{h}a]$_{DP}$ b. [[shó^{n}ge ak^{h}a]$_{DP}$ nó^{n}ba]$_{QP}$
    horse two   the   horse   the   two

'the two horses'   'two of the horses'

c. [mo^{n}k^{h}ó^n sabé júba   t^{h}e]$_{DP}$ d. [[shó^{n}ge ak^{h}a]$_{DP}$ wó^{n}githe]$_{QP}$
   coffee   little-bit the   horse   the   all
   'the little bit of coffee'   'all the horses'

The last type of noun modifier in (9), demonstratives, also occur both within and outside DP, though in a somewhat different way.   Within DP they are a postnominal modifier, as in (15a); they also occur either before or after DP as what I take to be an independent appositive phrase, though constructions of this sort are often translated as a single noun phrase in English. (So <u>she nikashi^{n}ga</u> or <u>she ak^{h}a nikashi^{n}ga ak^{h}a</u> will often be rendered as "that person".)

15.a. [nikashi^{n}ga she ak^{h}a]$_{DP}$
        person   that the
        'that person'

   b. [she (ak^{h}a)]$_{DP}$ [nikashi^{n}ga (ak^{h}a)]$_{DP}$ c. [nikashi^{n}ga ak^{h}a]$_{DP}$ [she (ak^{h}a)]$_{DP}$
      that the   person   the   person   the   that the
      'that person / that one, the person'   'that person / the person, that one'

Let us take it, then, that the structure in (9) is essentially correct; each post-noun modifier heads its own right-headed projection and functions in some sense as a predicate.

As a final footnote it is worth mentioning that one Omaha-Ponca construction which looks odd to Siouanists may turn out to be yet another right-headed phrase type. Unlike most Siouan languages, Omaha-Ponca often has a nominal or adverbial phrase at the very end of the sentence, after the normally clause-final auxiliaries and clitics. This phrase generally seems to be a topic, and it may head a Topic phrase, as in (16); one example is given.

16.a. [[   ] Topic]$_{TopP}$
    b. [Égithe duá=t^{h}e nídethe=t^{h}e]   <u>ké   tó^{n}ga</u>.
       finally this=art cooked=evid turtle big
       'Eventually it was cooked, the snapping turtle.'

<u>To sum up</u>...
(1) If person-markers and other verb prefixes are arguments instead of functional heads, their position with respect to the verb is not unexpected and the verb word is right-headed -- this gives some support to the notion of person affixes as pronominal arguments (though a purely morphological analysis is also possible).
(2) Post-noun modifiers are predicational elements which take a noun or nominal phrase as a complement. This means nominal phrases are not only right headed, but actually the same type of constituent as verbal phrases (clauses), headed by a verb or other predicational element. The fact that articles have the same form as evidentials and auxiliaries is then not an anomaly or a coincidence, but a consequence of the identity of nominal and verbal constructions.

<u>Conclusion</u>: Omaha-Ponca seems to be entirely right-headed; seeing all constituents as right-headed gives considerable insight into the overall syntax of the language.