Analyticity in the nominal domain supplement:
DP Structure in Japanese

• Challenges relating to analyticity in the analysis of DPs in Japanese


Point of departure/primary goal: to give a unified account of the structure and derivation of 4 different nominal patterns in Japanese:

(1) a. John-wa hon san-satsu-o katta
    John-TOP book 3-CL-ACC bought
    'John bought three books.'

    b. John-wa san-satsu-no hon-o katta
    John-TOP 3-CL-GEN book -ACC bought

    c. John-wa hon-o san-satsu katta
    John-TOP book-ACC 3-CL bought

    d. John-wa san-satsu hon-o katta
    John-TOP 3-CL book -ACC bought

Patterning in (1):

(2) a. N(P) Num CL ACC
    b. Num CL GEN N(P) ACC
    c. N(P) ACC Num CL
    d. Num CL N(P) ACC

Important assumption: (1/2a-d) should be related to a common base structure, and all comprise single, nominal constituents.

Area of possible dispute: patterns (a), (b) and (d) may be easily accepted as constituting unitary, nominal phrases, but it may be claimed that pattern (c) contains TWO separate constituents [N(P) + ACC] and [Num + CL], and that the post-nominal [Num + CL] is not part of the same nominal phrase as the [N(P) + ACC].
Argument for \([N(P) + \text{ACC}] \) and \([\text{Num} + \text{CL}] \) as a single constituent: possible occurrence in clefting:

(3) John-ga katta-no-wa **hon-o** **san-satsu** desu.
    John-NOM bought-C-TOP book-ACC 3-CL be
    'It is three books that John bought.'

Argument against the above: multiple constituents may seem to be able to occur in clefts, so occurrence of \([N(P) + \text{ACC}] \) and \([\text{Num} + \text{CL}] \) in clefts does not guarantee this to be a single constituent:

(4) Mary-ga ageta-no-wa **John-ni** **ringo-o mit-tsu** desu.
    Mary-NOM gave-C-TOP John-DAT apple 3-CL be
    'It is three apples to John that Mary gave.'

**Important analytic aspects of the analysis:**

I. The **CASE** morphemes -o and -ga are treated as instantiations of the head of a Case Phrase.

II. Number and Classifier elements are treated as instantiations of different positions, and are not assumed to constitute a single head (as in Muromatsu 1998, Kitahara 1993).

Compared to **Kitahara 1993** on patterns (a) and (c):

(5) common base DP case can be base-generated either on NP
    structure either on NP (pattern (c))
    NCP D or on NC (pattern (a))
    NP NC
    N | san-satsu (-o)
    | 3.CL (-ACC)
    N | hon (-o)
    | book (-ACC)

For Kitahara, ACC case is checked against D^0 by moving NCP to SpecDP if case is base-generated on NC (pattern (a)), and by moving NP to SpecDP if case is base-generated on N (pattern (c)).
Common base structure assumed by Watanabe 2005

(6)

\[
\begin{array}{c}
\text{DP} \\
\text{QP} \\
\text{CaseP} \\
\#P \\
\text{NP} \\
\end{array}
\]

- Nom/Acc case morphemes always occur in Case^0
- Classifiers occur in #^0
- It is suggested that numerals occur in Spec#P:

(7)

\[
\begin{array}{c}
\text{NP} \\
\text{hon} \\
\text{satsu} \\
\text{book} \\
\text{CL} \\
\end{array}
\]

Because the linear sequence [numeral NP classifier] is never attested, NP always moves to a higher position, SpecCaseP. Movement is triggered by an EPP feature in Case^0. This derives pattern (a):

(8)  hon san satsu o  
      book 3  CL  ACC

\[
\begin{array}{c}
\text{CaseP} \\
\text{NP} \\
\text{hon} \\
\text{san} \\
\text{NP} \\
\text{t} \\
\end{array}
\]

\[
\begin{array}{c}
\text{Case'} \\
\#P \\
\text{Case} \\
\text{NP} \\
\text{#} \\
\text{NP} \\
\text{#} \\
\text{NP} \\
\text{satsu} \\
\end{array}
\]
When Q is merged, there is optional raising of #P to SpecQP:

(9)

PF attachment of a genitive case-morpheme -no to #P then results in pattern (b):

(10) san satsu-no hon-o
3 CL GEN book ACC

Pattern (c) results from further movement applying to the structure in (9). When D is merged, CaseP is optionally attracted to SpecDP:

(11)

(12) hon o san satsu
book ACC 3 CL

Finally, for pattern (d), [san satsu hon-o], it is suggested that there may be two options:

Option I. CaseP in (11) is moved out of DP, and then DP is scrambled further forward:

(i) [CaseP hon-o]i [DP san satsu ti ]

(ii) [DP san satsu ti ]k [CaseP hon-o]i tk
Option II. The numeral + classifier are base-generated as a unit outside of, and preceding the DP as a secondary predicate or adverb.

Such options are intended to capture the conclusion reached by other researchers that the numeral + classifier do not form a constituent with the NP + case-marker in pattern (d).

**Instantiations of D and SpecQP**

$D^0$ is suggested to (sometimes) be instantiated by the morphemes -mo and -ka in (13). The accompanying, quantificational element *dono* is suggested to occupy SpecQP.

(13)  a. dono hon-mo
      which book MO
      'every book'

b. dono hon-ka
   which book KA
   'some book'

(14)    DP
      QP        D
       |     ka/mo
      dono   Q'
          which
           CaseP Q
              honi  Case'
                  book
                      #P Case
                          NP #
                              t_i

Other quantifiers such as *takusan* 'many' are assumed to occupy SpecQP when they occur.

**Challenges for a fully 'analytic' analysis of Japanese DPs**

The basic problem: deciding which overt morphemes provide reliable indications of underlying structure.

**Issue I. The position of numerals.**

It is suggested that numerals occur in a specifier position (Spec#P) because they appear to allow modification, and therefore might be concluded to be phrasal constituents:
(15) a. **at least** three books  
b. **more than** three books

(16) John-wa **sukunakutomo** san-satsu-no-hon-o katta  
John-TOP at least 3-CL-GEN-book-ACC bought  
'John bought at least three books.'

(17) \[\begin{array}{c}  
\text{NP} & \text{#} \\
\text{[sukunakutomo san]} & \text{at least 3} \\
\text{hon satsu book CL} & \text{#} \\
\end{array} \]

Complication: the Japanese equivalent of 'more than' occurs following the classifier, in a position that is unexpected if it is base-generated in Spec#P:

(18) John-wa san-satsu-**ijou**-no-hon-o katta  
John-TOP 3-CL-more.than-GEN-book-ACC bought  
'John bought more than three books.'

It is suggested that **ijou** is a suffix which is relocated from SpecQP to a position following the classifier after Spell-Out.  
\[\rightarrow \text{This aspect of the overt linear ordering of elements is/has to be treated as deceptive and does not reveal the underlying syntactic position of a functional head.}\]

**Issue II. The genitive case morpheme no**

It is suggested that: 'insertion of no is a matter of morphology and is not represented structurally' (p.16). Genitive no is simply added to part of the linear string produced by syntax in the post-Spell-Out part of the derivation.

Reasoning: no is iterable and so might not be thought to have a unique structural position:

(19) tsugi-no suugaku-no mondai  
next-GEN maths-GEN problem  
'the next maths problem'

\[\text{\footnote{Note that phrasal modifiers such as 'at least' and 'more than' could also be analysed as being the (phrasal) specifiers of a Number Phrase headed by numerals. The occurrence of such modifiers with numerals consequently does not force an analysis of the latter as occurring in a specifier position. To the extent that elements in specifier positions are assumed to 'specify' more precisely the properties of the head of a phrase (as in 'very angry at John', 'right over in the corner' etc), 'at least' and 'more than' might seem to be natural candidates for classification as specifiers of numerals. Note also that even if 'at least' and 'three' are assumed to occur together in a specifier position, they must be combined to form some kind of phrase with internal structure in Spec#P, hence numerals will be the heads of a numeral phrase/NumP modified by 'at least/more than' even if this NumP is assumed to be located in the specifier of some other phrase.}}\]
Another overt morpheme which is assumed not to correspond to a position in syntactic structure.

Case morphemes do not uniformly identify the underlying presence of a Case Phrase and a Case head position. Accusative, Dative and Nominative do. Genitive does not.

Related issue: Nominative -ga is iterable. How should this affect its structural analysis?

**GENERAL:** There are different views/positions on the potential correspondence of overt morphemes to underlying syntactic head positions.


- There is no morphological component separate from syntax. Syntax performs the task of assembling all morphemes into words.

**Syntax + independent morphology.** Some overt morphemes correspond to syntactic heads, others may be introduced by post-Spell-Out morphology and not correspond to any syntactic head positions.

The analysis of a syntactic structure one arrives at may depend on (at least) two important factors:

(a) Is the strongly analytic view held, that overt morphemes invariably correspond to syntactic head positions?

(b) Which morphemes does one 'start' one's analysis from? E.g. if one assumed that Japanese *ijou* in (18) was in a head position, this might lead to a rather different analysis of DP-internal structure here. If genitive *no* was assumed to be a syntactic head, this might also affect the analysis in significant ways.

**Issue III. The confounding power of morphology.**

An additional complication introduced into the probing of underlying syntactic structure from the linear position of overt morphemes and words comes from the apparent power of post-Spell-Out morphology to reverse orders created in syntax.

An example case: in Japanese DPs, when *dono* 'which' and *-mo/-ka* occur together with a case morpheme, the linear order is the opposite to what is expected from the analysis built up from other careful argumentation, represented in (14):
As shown in (20), the case morpheme follows -mo/-ka rather than precedes them:

(20) a. dono hon-ka-o  b. dono hon-ka-ga
    which book-KA-ACC  which book-KA-NOM
    'some book'         'some book'

b. dono hon-mo-ga
    which book-MO-NOM
    'every book'

Here it has to be suggested that the syntactically created order of the case particle and the quantificational particle is 'flipped' under adjacency in the morphological component. Flipping is assumed to result from morphological merger (Halle and Marantz 1993, Distributed Morphology).

Such flipping seems to be independently necessary to account for the linear ordering of postpositions and the quantificational particles. -mo has to occur outside P, whereas the syntactic structure should result in the order \([PP \ [DP \ \text{dono gakusei-mo}] \ P]\):

(21)  

(22) a. *dono gakusei-mo-kara  b. dono gakusei-kara-mo
    which student-MO from
    'from every student'

Concerning the position of -ka, it is possible for it to occur either following P, or preceding it:
(23) a. dono gakusei-ka-kara  
    which student-KA from 
    'from some student'  

b. dono gakusei-kara-ka  
    which student from-KA  
    'from some student'

The optionality in linear positioning seen with -ka relative to P seems to provide good support for the assumption that certain linear orders built by syntax can be converted into other orders (under adjacency) by post spell-out morphology.

For the purposes of identifying the underlying syntactic structure of constituents from the surface linear ordering of overt morphemes, such morphological reversal of syntactically created orders is clearly a difficult factor to control for, and can be very deceptive.

Conclusions

• Phrasal movement seems likely to be involved in the derivation of DPs in Japanese too, as in Southeast Asian languages.

• In a head-final language such as Japanese, head-movement within DP does not provide clear evidence for functional projections above NP, as this will be string-vacuous movement and undetectable. Phrasal movement and the landing-sites it requires does provide information about functional structure above NP.

• The existence of functional projections above NP is confirmed by (a) DP-internal patterns which require analyses of phrasal movement, and (b) the occurrence of overt heads of DP-internal functional categories (e.g. -mo, -ka, case-markers, classifiers).

• Interesting challenges arise when the attempt is made to map all overt DP-internal morphemes to functional heads. Certain overt morphemes may perhaps have to be concluded NOT to provide reliable information about the existence and location of functional heads.

References

