So-Called Pronoun-Noun Construction in Japanese:
A New Perspective on Nominal Syntax[*]

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This paper shows that personal pronouns in Japanese are neither D^0 nor N^0, but rather they sit in Spec position within (a certain extended projection of) the nominal phrase. Evidence comes from close examination of the so-called pronoun-noun construction in this language. Despite its name, the preceding nominals in this construction can be proper names or demonstrative phrases followed by an associative marker -tachi, *as well as personal pronouns. I claim that these three types of nominal elements form a single, natural class i.e., Indexical class, and that they are merged in a designated position within nominal phrases, which is identified as SpecCaseP. I further argue that these Indexical nominals are syntactically distinguished from intensional, property-denoting lexical nominals. In a nutshell, CaseP is the locus of reference-fixing, where properties or intensions denoted by a lexical nominal are related to individuals directly referred to by an Indexical, extensional nominal in SpecCaseP.*

Keywords: plural pronouns, proper names, light nouns, Indexicals, associative markers

1. Introduction

Since Postal (1969), personal pronouns in English have been said to occupy the same position as (definite) articles. One piece of the most forceful evidence comes from their distribution within nominal phrases. As shown in (1), English personal pronouns can be followed by a lexical NP, on a par with standard articles like *the*. This construction is dubbed as the "pronoun-noun construction," for obvious reasons.

(1) a. we/us linguists
     b. you linguists
     c. % them linguists   (Déchaine and Wiltschko 2002)

Interestingly, as Noguchi (1997) and Furuya (2004 et seq.) observe, apparently parallel expressions can be found in Japanese, as in (2).

(2) a. watashi-tachi   gengogakusha
         1SG.-TACHI   linguist
     b. anata-tachi   gengogakusha
         2SG.-TACHI   linguist
     c. kare-ra   gengogakusha[1]
         3MASC.SG.-RA   linguist

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[1] Along with *-tachi*, Japanese "plural markers" include *-ra* in *kare-ra* or *aitsu-ra*, *-gata* in *anata-gata* (2PL.HONORIFIC), or use of duplication in *ware-ware* (1PL.), to name but a few. Subtle differences in lexical restriction seem to exist among these items, the topic I will reserve for another occasion. In this article, I will use *-tachi* as a representative of these "plural markers," abstracting away the differences.

It might be telling that third person (masculine) pronouns are distinguished from first and second plurals in that the former use *-ra* rather than *-tachi* (*kare-tachi), cf. the degraded status of the English counterpart in (1c).

Furthermore, the plural pronoun restriction observed in English, which excludes the use of singular pronouns in the pronoun-noun construction, is also observed in Japanese.

(3) a. *I/me linguist
    b. *you linguist
    c. *he/him/she/her linguist
(4) a. *watashi   gengogakusha
        1SG.   linguist
    b. *anata   gengogakusha
        2SG.   linguist
    c. *kare/kanojo   gengogakusha
        3MASC.SG./3FEM.SG.   linguist

At first glance, the above parallelism suggests the uniform analysis of the pronoun-noun constructions in these two languages. This simplex expectation faces an immediate analytical problem, though. If we adopt pronoun-as-D^0 analysis as in (5), adopting the DP hypothesis since Abney (1987), then a rough internal structure of English pronoun-noun expressions looks like (5).

(5)   [$_{DP}$ *we/us*$_D$ [$_{NP}$ *linguists*]]

This structure cannot be maintained for Japanese counterparts. Japanese, as a strictly head-final language, must be assumed to have these pronouns in the Spec position.

(6)   [$_{DP}$ [*watashi-tachi*] [$_{D'}$ [$_{NP}$ *gengogakusha*] D^0]]

Thus we are led to the hypothesis as stated in (7).

(7)   Pronoun-as-Spec Hypothesis:
       Japanese pronouns occupy the Spec, rather than the Head, position within nominal phrases.

In this paper, we start with the hypothesis in (7) and examine its consequences for the theory of Japanese nominal structure. The paper is organized as follows: section 2 provides a new piece of evidence for the XP-hood of pronouns and reformulates the formal conditions imposed upon the pronoun-noun construction; section 3 offers an explanation of the conditions as reformulated in section 2, followed by discussion on the mapping of syntactic structures into semantic interpretations. Section 4 concludes the paper.

2.   (Pro)noun-Noun Construction in Japanese: Data

2.1.   *The First Element (xNP₁)*

One of the direct consequences of (7) is that, given that the preceding nominal element in the pronoun-noun construction lies in Spec rather than Head, the phrase-structural status of it must be XP, rather than X^0. This consequence leads us to expect that expressions other than personal pronouns can in principle occur in this position. The expectation is confirmed by examples like (8).

(8) a. Taroo-tachi   daigakusei   [proper name + *TACHI*]
         Taro-TACHI   undergrad
         'Taro and his folks undergrads'

    b. {ano/sono/kono} {hito/ko}-tachi   kookoosei   [demonstrative + noun + *TACHI*]
         {that/that/this}   {person/kid}-TACHI high.school.student
         'this/that person/kid and his folks high school students'

    b'. aitsu-ra   daigakuinsei[2]
          that.guy-RA   grad.student
          'those guys graduate students'

    c. Taroo ya Hanako-tachi   kitsuensha[3]   [coordination (of proper names) + *TACHI*]
         Taro   and Hanako-TACHI smoker
         'Taro, Hanako, and their folks smokers'

In the examples above, expressions other than pronouns are used as the first element in the construction at issue; proper name + *tachi*, a (certain) noun following a demonstrative + *tachi*, and even the coordination of proper names + *tachi*, respectively. That these expressions in fact have the same structure as those in the pronoun-noun construction is indicated by the ungrammaticality of their singular counterparts (9).

(9)   *{watashi/Taroo/kono hito} butsurigakusha (-ga   mondai-o   shitekishita.)
            {I/Taro/this person}   physician   (-NOM   problem-ACC pointed.out)

In the following discussion, we will call the first element in this construction xNP_1, and the second element xNP_2 as in (10), for ease of exposition.[4]

(10)   [$_{FP}$ [$_{xNP_1}$ *watashi-tachi*] [$_{xNP_2}$ *gengogakusha*] F^0]

It is not the case that any nominal elements can show up in xNP_1, though. Common nouns like *wakamono* (young.person) cannot occur in xNP_1, as in (11a), even when they appear with a demonstrative (11b).

(11) a. *wakamono-tachi   daigakusei   [*common noun + *TACHI*]
           young.person-TACHI   undergrad
           'young people undergrads'

    b. *kono wakamono-tachi   daigakusei
          this   young.person-TACHI   undergrad
          'this young guy and his folks undergrads'

A rather surprising is the contrast found between (8b) and (11b). At first glance, both cases involve as xNP_1 the sequence Demonstrative-Noun-*Tachi*, with the sole difference being the lexical choice of nouns: *hito* versus *wakamono*. I claim the difference is categorical; in other words, items such as *hito* and *ko* form a class distinct from items such as *wakamono* and *daigakusei*. The fact that the former cannot be used "bare," as illustrated in (12),

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[2] Expressions like *aitsu-ra* and *koitsu-ra* can be morphologically analyzed as *a-y(a)tsu-ra* (that-guy-Pl) and *k-y(a)tsu-ra* (this-guy-Pl), respectively, in which case these expressions could be treated on a par with (11b).

[3] This expression is structurally ambiguous: [*Taroo ya Hanako*]-*tachi* or *Taroo ya* [*Hanako-tachi*]. The relevant structure is the former. For unknown reasons, another nominal coordinator *to* (and) in Japanese seems to prefer the latter interpretation (i.e., *Taroo to [Hanako-tachi]*) at least for some speakers. The use of *ya* obviates this bias. Thanks to Chigusa Morita for pointing out this fact.

[4] These terms are borrowed from Matushansky (2008), where xNP is used as a cover term for any extended projection of NP.

lends support for this distinction.[5, 6]

(12)   kono gakkai-de-wa,   *(takusan-no / wakai / watashi-ga sonkeisuru)
         this conference-at-TOP *(many-GEN / young / I-NOM   respect)
         hito-ga   happyooshiteiru.
         person-NOM   make.a.presentation
         'In this conference, many people / young people / people who I respect make presentations.'

In the following discussion, I will call items such as *hito* and *ko* "light nouns," as distinguished from full lexical nouns.[7]

    Turning back to the main track, it is commonly argued that Japanese nouns can be interpreted as plural in their bare forms. Consider (13).

(13)   Wakamono-ga   hiroba-ni   atsumatta.
         young.person-NOM   common-at gathered
         'Young people gathered in the common.'

In this example, *wakamono* must denote plural entity, given that a collective verb *atsumaru* 'gather' requires its subject to be plural. Now consider the examples in (14).

(14)   a. *Wakamono   kookoosei-ga   hiroba-ni   atsumatta.
            young.person high.school.student-NOM   common-at gathered
       b. *Kore-ra-no   ko yoochienji-no   hatsuwa-o   kirokushita.
            this-RA-GEN   kid kindergartener-GEN   speech-ACC recorded

If the plural restriction imposed on the (pro)noun-noun construction were a semantic restriction, these sentences would be acceptable, since expressions such as *wakamono* and *kore-ra-no ko* can in themselves denote plural entity. The unacceptability of (14) leads us to conclude that the plural restriction at issue is morphological; that is, xNP$_1$ in this construction must be overtly marked as plural by the use of *-tachi*.

    Thus the restrictions on xNP$_1$ in the (pro)noun-noun construction in Japanese are summarized as in (15).

(15)   The Form of xNP$_1$:
       a.   xNP$_1$ must be (i) pronouns, (ii) proper names, or (iii) light nouns with demonstratives; and
       b.   They must be overtly *tachi*-marked.

2.2.   The Second Element (xNP$_2$)

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[5] For more evidence for the peculiarity of the lexical item *hito* in Japanese, see Inokuma (2008).
[6] An anonymous reviewer points out that bare *hito* is in fact allowed in examples like (i).

(i)   a.   Kyoo-wa hito-ni   au   yakusoku-ga   aru.
            today-TOP person-DAT meet appointment-NOM   exist
            'Today I have an appointment to meet a (certain) person.'
       b.   Hito-wa   wagamamana ikimono-da.
            person-TOP selfish   creature-COP
            'People are selfish beings.'

(i-a) apparently forces a specific reading of *hito*, while (i-b) forces a generic reading. Specificity/definiteness effects, alongside the generic readings, are one of the controversial issues in Japanese nominal syntax (see e.g., Kurafuji 2004), though I will spare the discussion for future research.
[7] A principled way of delimiting the class of light nouns is yet to be clarified.

The second element, xNP$_2$, is also restricted in terms of its class and form. As shown in (16), xNP$_2$ cannot be a (plural) pronoun, nor can it be proper name + *tachi*.

(16) a. *Taroo-tachi kare-ra
          Taro-TACHI 3MASC.SG.-RA
      b. *kare-ra   Taroo-tachi
          3MASC.SG.-RA Taro-TACHI

Even when xNP$_2$ is projected from a full lexical noun, neither demonstratives such as *ano* nor plural marking *-tachi* can occur in xNP$_2$.

(17) a. *kanojo-ra   ano   daigakusei
          3FEM.SG.-RA that(those) undergrad
      b. ??watashi-tachi nihonjin-tachi[8, 9]
          1SG.-TACHI   Japanese-TACHI

On the other hand, numeral + classifier phrases can occur in xNP$_2$ to a large extent, as shown in (18).

(18) a. Watashi-tachi **san-nin**-no daigakuinsei-ga   zatsuyoo-o tanomareta.
          1SG.-TACHI 3-CL-GEN grad.student-NOM chore-ACC were.asked
          'We three graduate students were asked to do a chore.'
      b. Watashi-tachi daigakuinsei **3-nin**-ga   konshinkai-ni shussekishimasu.
          1SG.-TACHI   grad.student 3-CL-NOM reception-to are.going.to.attend
          'We three graduate students are going to attend the reception.'

Even for the speakers who find (18) somewhat awkward, the contrast between (18) and (19) is clear. In (19), the numeral + classifier phrase is put in front of xNP$_1$.

(19)   ***San-nin**-no watashi-tachi daigakuinsei-ga   ronbun-o   shippitsushita.
          3-CL-GEN 1SG.-TACHI   grad.student-NOM paper-ACC wrote

In section 3 below, the (in)compatibility of xNP$_2$ with these expressions will be exploited in determining the internal structure of nominal phrases.

To sum up, the restrictions imposed on xNP$_2$ in the (pro)noun-noun construction in Japanese are stated as in (20).

(20) The Form of xNP$_2$:
      a. xNP$_2$ must be lexical noun phrases; and
      b. they must not be *tachi*-marked.

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[8] Furuya (2004) judges the expression like (17b) as acceptable, the intuition I do not share with her.
[9] A reviewer wonders whether the recursive attachment of *-tachi* would be possible, deriving the same string as (17b).

(i) a. ??[watashi-tachi nihonjin]-tachi
          [1SG.-TACHI Japanese]-TACHI
          '(intended.) people represented by us Japanese (which might include people from other countries)'

I find these "recursive" cases unacceptable, and the analysis presented here does predict ungrammaticality. In any case, the discussion in the text has nothing to do with this structure.

3.   An Analysis

Given that the forms of xNP$_1$ and xNP$_2$ are restricted in the manner stated in (15) and (20) respectively, the next question to ask is why they must be so. In particular, since we abandon the idea that pronouns do not head DP (at least in Japanese) and claim that pronouns, proper names, and demonstrative + light nouns form a natural class, we must explain in what respect they form a natural class. In the next subsection I will show that they do form a single class, in that these three expressions are all used as direct-referring expressions, i.e., that they are Indexicals.

3.1.   *xNP$_1$ as Direct-Referring Indexical + Associative Marker*

The hypothesis I would like to put forth is that the elements which can appear in xNP$_1$ form a natural class of *Indexical*, or *deictic*, elements. This class is contrasted to that of full lexical nouns, which denote *properties*, rather than directly refer to individuals. Pronouns typically refer to individuals salient in the given discourse,[10] and proper names (in their argument use) designate, or name, individuals, rather than describe the properties of them. Demonstrative + light nouns can be analyzed along the same line if we assume that, as hinted at above, the light nouns are defective compared to full lexical nouns. I assume that light nouns are defective in that they do not denote properties (or "intensions") by themselves. The unacceptability of bare use of these nouns in (12) is explained away straightforwardly. With recourse of demonstratives, light nouns can be used indexically, in much the same way as pronouns and proper names.[11]

In fact, we must step further in order to fully restrict the form of xNP$_1$. As observed in (11), full lexical nouns cannot appear in xNP$_1$, even when they occur with demonstratives. We take this restriction as the ban on the property-denoting elements in xNP$_1$. In other words, xNP$_1$ must be Indexical elements without any property-denoting (intensional) elements. Thus we arrive at the proper characterization of xNP$_1$ as in (21).

(21)   Semantic Restrictions on xNP$_1$:
      a.   xNP$_1$ must be *Indexical* elements, which include (i) pronouns, (ii) proper names, and (iii) light noun phrases with demonstratives; and
      b.   xNP$_1$ must not denote properties (intensions).

Next, recall that xNP$_1$ must satisfy another requirement: the obligatory presence of the plural marker *-tachi*. In this light, consider the semantics of *-tachi* as formulated by Nakanishi and Tomioka (2004).

(22)   Interpretation of Associative *-Tachi*:   (Nakanishi and Tomioka 2004: (27))
$$[[\textbf{tachi}]] \in D_{\langle e, \langle e, t \rangle \rangle} = \lambda x_e . \lambda Y_e . \; x \leq_i Y \; \& \; |Y| \geq 2 \; \& \; x \text{ represents } Y$$

They argue that Japanese *-tachi* is an "exceptional" plural marker, or an "associative" plural marker in our term. Unlike "uniform" plural markers like English *-s*, Japanese *-tachi* forms a set whose members are not necessarily uniform. This non-uniformity of *-tachi* is encoded in the final component in (22), where an individual x "represents" a set Y in the interpretation of the expression 'x-tachi.' Intuitively put, (22) reads as: *-tachi* forms a set of individuals containing an individual x and (a) person(s) related to x in some contextually well-defined manner.

Combining (21) with (22), we can restate the plural restriction on the (pro)noun-noun construction as in (23).

(23)   Associative Reformulation of Plural Restriction on (Pro)noun-Noun Construction:
      xNP$_1$ is an associative plural formed on the basis of the Indexical element as its "pivot."

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[10] I am putting aside the bound use of pronouns here.
[11] Or it might be more accurate to say that light nouns used with demonstratives occur as a last resort. That is, light nouns, by virtue of being a minimum specification for human beings, are realized as a placeholder when demonstratives must be marked for [+human].

Note that interpreting xNP$_1$ as an associative plural receives independent support from decompositional approach to personal pronouns (Cysouw 2001, Bobaljik 2008, Vassilieva and Larson 2005 among many others). In this line of thinking, first person plural pronouns are analyzed as SPEAKER (=1sg.) +ASSOCIATIVE, as contrasted to several SPEAKERS (i.e., "echo" interpretation of 1pl. pronouns), for instance. Although not all languages have associative markers like Japanese *-tachi*, it is safe to say that in the pronominal paradigm, plural pronouns always have an associative reading. In this sense, the apparent "plural" restriction on the (pro)noun-noun construction has been misguided and must be reformulated in terms of presence/absence of associative markers.

(24)   Associative Analysis of Plural Pronouns:
    a.   **1PL** =   1SG + ASSOC   *watashi* + TACHI
    b.   **2PL** =   2SG + ASSOC   *anata* + TACHI
    a.   **3PL** =   3SG + ASSOC   *kare* + RA

3.2.   Combination with xNP$_2$: CaseP as the Locus of Reference-Fixing

In this subsection, we will focus on the syntactic structure of nominal phrases in Japanese, as revealed by the (pro)noun-noun construction in this language. To do this, I employ Watanabe's (2006, 2009) phrase-structural format of nominal phrases in Japanese. According to Watanabe's theory, (argument) nominal phrases have at least four extended projections above lexical NP.

(25) $[_{DP}$ Spec $[_{QP}$ Spec $[_{CaseP}$ Spec $[_{\#P}$ Spec $[$ NP $]$ #^{0} $]$ Case^0 $]$ Q^0 $]$ D^0 $]$

Watanabe's (2006, 2009) interest is in the distribution and behavior of number features within nominals. In Japanese, numeral + classifier expressions appear in various positions with regard to the head nouns. Consider (26).

(26)   a.   gakubusei   san-nin-ga   (kessekishita.)
           undergrad   3-CL-NOM   (were.absent)
           'Three undergrads were absent.'
    b.   san-nin-no gakubusei-ga   (kessekishita.)
           3-CL-GEN   undergrad-NOM   (were.absent)
    c.   gakubusei-ga   san-nin   (kessekishita.)
           undergrad-NOM   3-CL   (were.absent)

I refer the reader to Watanabe's original work for the technical details and just introduce general architecture of nominal structures. Watanabe claims that classifiers are #^{0}, with numerals in their Spec. The lexical NP obligatorily moves into SpecCaseP; otherwise the correct word order would never be attained.[12]

(27)   … $[_{CaseP}$ $[_{NP}$ *gakubusei* $]$ $[_{\#P}$ *3* $[_{NP}$ ~~*gakubusei*~~ $]$ *nin*$_{\#^0}$ $]$ *-ga*$_{Case^0}$ $]$ …

If no more movement takes place, we get the order in (26a); if the (remnant) #P in (27) moves into SpecQP, we get (26b); and this movement is further followed by the movement of (again, remnant) CaseP into SpecDP, we get (26c).

Crucial in the analysis of the (pro)noun-noun construction is CaseP. I assume that the Indexical elements, i.e., xNP$_1$, are base-generated in SpecCaseP. This assumption makes sense if we take into account that for many

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[12] Watanabe does not specify whether this movement of NP to SpecCaseP involves movement to Spec#P as an intermediate step. The choice is orthogonal to the present discussion as well.

authors, including Watanabe, CaseP is the locus of reference-fixing in argument nominals. Although actual implementations vary (for instance, CaseP is related to Specificity in Watanabe (2006), Referentiality in Cardinaletti and Starke (1999)), the intuition shared in these works should be clear enough.[13]

Adopting the hypothesis that xNP_1 is merged in SpecCaseP, the syntactic structure of the (pro)noun-noun construction in Japanese looks like (28) and (29).

(28)   a.   … [$_{CaseP}$ [xNP_1] NP [$_{\#P}$ Spec ~~NP~~ $\#^0$] Case^0] …

         b.   … [$_{CaseP}$ [$_{xNP_1}$ *watashi-tachi*] *gengogakusha* [$_{\#P}$ Spec [$_{NP}$ ~~*gengogakusha*~~] $\#^0$] -*ga/o*$_{Case^0}$] …

(29)
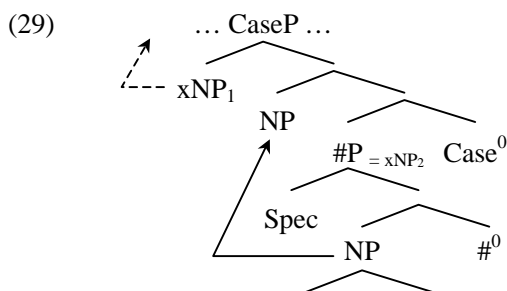
As observed in the preceding section, xNP_2 is compatible with numeral + classifier expressions (18); which forces us to say that xNP_2 must project at least $\#P$ in Watanabe's phrase structure.[14] In order to guarantee the word order in (18a), xNP_1 must move further to the position higher than SpecQP (see also (26b)). The most plausible option seems to be that this movement of xNP_1 targets SpecDP, in accordance with the standard view that DP defines a higher functional layer within nominal projections. Thus the resulting structure after this movement will be as in (30).[15]

(30)
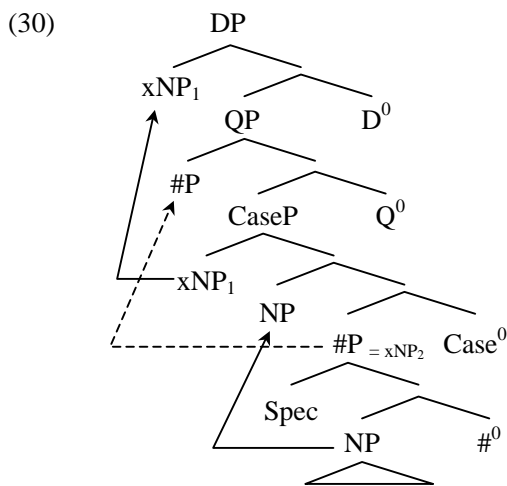
Notice also that the syntax of CaseP is parallel to that of its clausal counterpart. In *v*P, the subject nominal phrase is merged in its Spec, thereby moves to the higher position of SpecTP.

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[13] See also Campbell (1996).

[14] In (29), I assume that the movement of NP into SpecCaseP takes the form of tucking-in in the sense of Richards (2001), though the present discussion is independent of the validity of this assumption.

[15] The present approach departs from Watanabe's theory with respect to the projection that moves into SpecDP; for Watanabe, it is CaseP (see (26c)), for us, it is xNP_1. Evidence against movement of CaseP into SpecDP is also provided in Inokuma (2008).

(31)
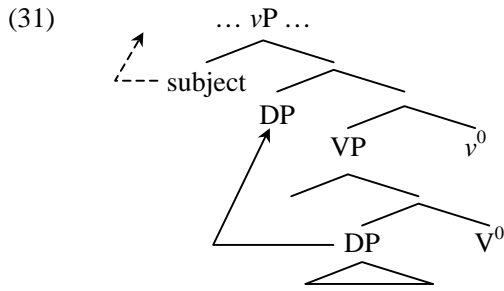
The Indexical xNP_1 within a nominal phrase could be said to have a function that is parallel to the subject within vP. In the latter case the subject saturates the argument slot to complete the thematic structure of its verbal head; in the former case the xNP_1 "saturates" the reference slot of its nominal head. In this respect the present analysis might be seen as a further support for the clause-nominal parallelism, in this case with regard to relatively low, thematic projections of vP and CaseP, as contrasted to TP/CP and DP.

3.3.   Division of Labor within Nominals: Indexicals, Associatives, and Properties

In the above subsection, we have identified xNP_1 as Indexicals occupying the position of SpecCaseP, and xNP_2 as #P occupying the complement position of that CaseP. This subsection offers an answer to the following puzzle: why xNP_1 must be associative plural.

At first glance, the associativity of xNP_1 has nothing to do with the licensing of the (pro)noun-noun construction. In this respect, the present situation might seem to be no different from the previous analyses: the restriction on plural pronouns does not find any conceptual support as the licensing condition of the pronoun-noun construction.[16] To solve this puzzle, consider the two sentences in (32).

(32)   a.   *Taroo to   Jiroo to   Hanako gakubusei-ga   tetsudattekureta.
             Taro   and   Jiro   and   Hanako   undergrad-NOM   supported
       b.   Taroo-tachi   gakubusei-ga   tetsudattekureta.
             Taro-TACHI   undergrad-NOM   supported
             'Taro and his fellow undergrads supported us.'

In principle, these two sentences could have the identical interpretation, yet the contrast in their acceptability is robust. The only difference between the two is the use of associative *-tachi*. In (32a), all of the intended referents are directly referred to by xNP_1, *Taroo to Jiroo to Hanako*. In (32b), the referents of xNP_1 are not enumerated exhaustively by the use of associative *-tachi*. The contrast begins to make sense if we consider the semantic import of xNP_2 in this construction. xNP_2, because of denoting the properties rather than individuals, functions as a restrictor in the interpretation of the whole DP.[17] In (32a), since all of the referents denoted by the DP are already enumerated, or referred to exhaustively, by xNP_1, there is no need for xNP_2 to (intensionally) restrict the membership of the set denoted by the whole DP. In (32b), on the other hand, the set of individuals denoted by xNP_1 *Taroo-tachi* lacks any restriction on its membership either extensionally or intensionally.[18] Hence xNP_2 comes to have semantic import in (intensionally) restricting the membership of this set. Put another way, xNP_2 is allowed to occur in order to fill in the interpretive "gap" between Indexicals and assotiative *-tachi*. This mode of explanation enables us to characterize the associative *-tachi* as an extensional plural marker (33).

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[16]   To the best of my knowledge, attempts to explain the plural pronoun restriction are always mechanical ones (Munn and Schmitt 2005, Furuya 2004 among others).
[17]   In other words, xNP_2 is a predicate in the sense of Stowell (1989, 1991).
[18]   The only restriction is that the member(s) be related to the pivot (*Taroo* in this case) in some respect.

(33)   Extensional Characterization of Associative -*Tachi*:
        -*Tachi* forms a plurality whose membership is defined extensionally.

The circumstance in which xNP$_2$ can appear is now stated as in (34). I claim that this is the appropriate characterization of the plural restriction on the (pro)noun-noun construction.

(34)   Complementarity between Direct-Referring Indexicals and Property-Denoting nominals:[19]
        xNP$_2$ (that is, #P) that denotes properties cannot appear if the Indexicals in SpecCaseP directly refer to all of the individuals denoted by the whole DP.

If the analysis put forth here is on the right track, the unacceptability of (32a) is explained in the same fashion as the unacceptability of the singular cases like (35).

(35)   *watashi   gakubusei (-ga   tetsudaimasu).
            1SG.   undergrad (-NOM   will.support)

In this case too, xNP$_2$ cannot occur since the referent of the whole DP is directly referred to by xNP$_1$ (namely, the speaker).

4.   Conclusion

In this paper I have argued that pronouns in Japanese occupy the SpecCaseP, rather than head the DP as is standardly assumed. Since proper names and demonstrative + light nouns behave in the identical manner in the so-called (pro)noun-noun construction, I claim these three elements form a single class, namely Indexicals. Indexical elements are merged into SpecCaseP for the sake of reference-fixing: CaseP is the locus at which the properties/ intensions denoted by xNP$_2$ (#P in the present analysis) are computed with individuals directly referred to by the Indexicals. The use of associative marker -*tachi* is crucial in allowing the occurrence of xNP$_2$ since -*tachi* brings about the "underspecification" of referents referred to by the whole DP, giving rise to the semantic import of xNP$_2$ in this construction.

The categorial status of xNP$_1$ is yet to be investigated. On the one hand, the Indexical character of xNP$_1$ suggests that they have nominal projections in nature; on the other, the ban on full lexical nouns suggests that they are syntactically "defective" in some respect. Recall the complementary characterization of xNP$_1$ and xNP$_2$ in (15) and (20), respectively. The strongest hypothesis with regard to their internal structures would then be that this complementarity is expressed in syntactic terms: if xNP$_2$ is syntactically realized as #P, xNP$_1$ is devoid of (at least) this projection. If tenable, this conclusion would be a surprising one, allowing nominal projections to lack their lower, lexical, domains. I will spare the investigation for future research.[20, 21]

As a closing remark, let us consider again the English examples. Now that the plural restriction is reformulated in terms of an associative marker, why is xNP$_1$ restricted to plural pronouns in this language? In fact, the answer has been already hinted at in section 3: plural pronouns are the only elements that can be used associatively, perhaps universally. Thus the simplest hypothesis is that the same restriction is at work both in Japanese and in

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[19] This condition might be seen as an instance of economy principles in representation.

[20] Note however that this sort of "truncation" of intermediate or lower projections would be necessary in any theories once we permit the recursive occurrence of the same categories within a single nominal: [$_{DP}$ [$_{DP}$ Spec] [$_{D'}$ D^0 [$_{NP}$ …]]]. In this schematic structure, the lower DP must be "deficient" in some sense; otherwise we would have infinite regress. See Watanabe (2009) for a similar problem caused by measure phrases within DP, and a solution of it.

[21] Also, this line of thought leads us to analyzing proper names as base-generated in a position distinct from full lexical nouns. This conclusion departs from the previous analyses such as Longobardi (1994) and more recently Matushansky (2008), where proper names originate in N and thus can function as predicates in some cases. In any case, the theoretical dividing ridge would be how to capture the notion of Indexicality in syntactic terms.

English, the only difference being in the lexical repertoire: the presence versus absence of an associative marker that can be attached freely to lexical items, independent of pronominal paradigms.[22]

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[22] This conclusion implies that in English too, pronouns do not head DP and are merged in SpecCaseP, yet another topic for future research.

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