On DPs, NPs, and their respective pronouns*

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1 Introduction

• This talk will present research aimed at determining the syntactic categories of pronouns in different languages, and predicting the category of a language’s pronouns based on other aspects of its syntax.

• Pronouns have different properties across languages; in some languages pronouns may be modified by attributive adjectives and genitive NPs, as in Japanese (1); in other languages like English they may not (2):

(1) a. ookii kare
big he
‘big he (or, he who is big)’

b. kyou-no kare-no hou-ga kinou-no kare yori atamagaii desu.
today-GEN he-GEN way-NOM yesterday-GEN he than smart is
‘Today’s he is smarter than yesterday’s him (or, he is smarter today than yesterday).’

(2) a. *Big he bought pizza.
b. *Today’s he is smarter than yesterday’s him.

• This has been explained in terms of the syntactic category: Pronouns which may receive attributive modification realize only NP, while unmodifiable pronouns realize the full DP (Fukui 1988; Noguchi 1997).

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– Attributive modifiers are generally analyzed as adjuncts or specifiers to NP or some intermediate projection in the nominal extended projection (the precise placement of modifiers does not affect my analysis).

– If a pronoun realizes the full DP projection, there is nowhere for modifiers to attach, hence the unmodifiability of DP pronouns.

– Modifiability has been used as a diagnostic for pronoun category (Bošković 2008; Fukui 1988; Noguchi 1997).

1.1 Theoretical Assumptions

• I am assuming the existence of extended projections as in Grimshaw (1991): there is a set of functional categories which dominate NP, including DP, NumP and possibly some others, in the following configuration:

(3)

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    DP
   / \ NumP
  D   Num
   \  NP
    \ N
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• I remain agnostic as to the precise layout of the intermediate projections; for example, what I call NumP may be split into a cardinality projection and a division/classifier projection, along the lines of Borer (2005).

• My analysis rests on three crucial assumptions:
  – Certain functional projections may be absent in certain languages (particularly, DP may not be present in every nominal projection).
  – No part of the nominal projection dominates DP; if DP is present, it “closes off” the projection (allowing no attributive modification, and perhaps forming a phase).
  – There is no functional category for case (KP); case is “assigned” to an argument externally, based on its structural position (a standard minimalist assumption; see Chomsky 2000, or Pesetsky 2013 for a more recent proposal).

1.2 Roadmap

• In Section 2 I will show a brief survey of the modifiability of pronouns in a selection of languages.

• In Section 3, I will show evidence from the realization of morphology on pronouns that there are, in fact, at least three categories of pronoun: Modifiable pronouns in some languages appear to include NumP but not DP.

• In Section 4, I will lay out some of the generalizations which emerged in the previous sections, and propose some possible accounts to explain the cross-linguistic distribution of the various pronominal categories.
Finally in Section 5, I will present a puzzle from the Slavic language family which challenges this endeavor: Russian and Serbo-Croatian (S-C) are closely related languages with similar nominal syntax, yet they differ in the modifiability of their pronouns (Russian – unmodifiable, S-C – modifiable). I will present some steps toward a possible solution.

2 Modifiability

In (1) and (2) I showed that Japanese pronouns are modifiable, while English ones are not. Here I will present more data from a variety of languages and show which ones have (un)modifiable pronouns.

2.1 Modifiable Pronouns

Here I will show that pronouns may be modified in Mandarin, Korean, and Serbo-Croatian.

- Mandarin:

  (4) Nian qing de wo bu hui kai che.
  young PRT 1SG not know.how drive
  ‘(lit.) Young me didn’t know how to drive.’

- Korean:

  (5) Onul-uy ku-ka ecey-uy ku-pota te hyenmyengha-ta.
  today-GEN he-NOM yesterday-GEN he-than more smart-DECL
  ‘Today’s he is smarter than yesterday’s him.’

- Serbo-Croatian (Rumić 2011, p. 39):

  (6) Jesi li ga vidio juče? Jesam, ali je jučerašnji on baš nekako bio
  are Q him.Cl.Acc seen yesterday Am but is yesterday’s he really somehow been
  strange
  ‘Did you see him yesterday? I did, but yesterday’s he was really somehow strange.’

2.2 Unmodifiable Pronouns

Here I will show that pronouns may not be modified in Finnish, Turkish, Polish, and Russian.

- Finnish:

  (7) *Hän on viisas joka päivä mutta eilisen hän oli viisaampi kuin
  he is smart every day but yesterday.Gen s/he was smarter than
  tämänpäivän hän.
  today.Gen s/he
  ‘He is smart everyday but yesterday’s s/he was smarter than today’s s/he.’
3 Agglutination, Fusion and Realization of Projections

Here I will show another diagnostic for the syntactic category, which indicates that there are in fact more than two types of pronoun.

Neeleman and Szendrői (2007) examine the phonological spell-out of pronouns cross-linguistically.

They claim that, while spell-out of pronouns may target non-terminal nodes like DP, the exact node that is targeted varies across languages, and that clues as to which node is targeted come from how the functional heads are realized morphologically.

Specifically, if a functional head (such as Num) is realized fusionally on a pronoun, then that pronoun’s spell-out rule includes that head’s maximal projection (i.e. NumP).

On the other hand, if a head’s content is realized as agglutinative morphology on a pronoun, then that head is spelled out as a separate lexical item, and the pronoun realizes some smaller projection that does not include that item.

In this section I will examine the pronominal paradigms of the languages of my survey, and show that, while many of the modifiable pronouns are indeed pro-NP as previously claimed, some must realize some larger projection, perhaps pro-NumP.¹

3.1 Agglutinative pronouns

Neeleman and Szendrői (2007) examine the pronominal systems of Mandarin, Japanese and Korean, finding them to be agglutinative and concluding that the pronouns in these languages realize NP.

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¹Neeleman and Szendrői assume the universal presence of a KP projection dominating DP. For reasons stated above, I do not think this projection is necessary to account for case marking in general, although my analysis is compatible with the presence of KP in certain languages, such as Japanese, Korean, and other languages with overt case particles. However, for now I will leave KP out of the picture.
• For example, Mandarin pronouns have agglutinative morphology for number – the morpheme *men* indicates plurality for all persons (p. 689):

\[(11)\]
\[
\begin{array}{ll}
\text{sg} & \text{pl} \\
\text{1} & \text{wǒ-men} \\
\text{2} & \text{nǐ-men} \\
\text{3} & \text{tā-men}
\end{array}
\]

• Japanese and Korean pronouns have similar agglutinative morphology for number, leading Neeleman and Szendröi to conclude that these languages also have pro-NP.

### 3.2 Fusional pronouns

• In all of the languages in which pronouns were shown to be modifiable, the pronouns show fusional morphology for number, suggesting that these pronouns are at the very least pro-NumP (which is compatible with their being pro-DP as previously hypothesized, since DP dominates NumP).

  – For example, English and Turkish nominative pronominal paradigms are shown below (Turkish data from Ayşegül Kutlu, p.c.):\(^2\)

\[(12)\]
\[
\begin{array}{ll}
a. & \text{I} \\
& \text{you} \\
& \text{he/she/it} \\
& \text{we} \\
& \text{you} \\
& \text{they}
\end{array}
\begin{array}{ll}
b. & \text{ben} \\
& \text{sen} \\
& \text{o} \\
& \text{biz} \\
& \text{siz} \\
& \text{onlar}
\end{array}
\]

  – Neeleman and Szendröi (2007) also mention that Finnish and Russian pronouns are fusional in their number morphology.

  – Thus, data from pronoun morphology supports the hypothesis that unmodifiable pronouns realize pro-DP.

• Surprisingly, Serbo-Croatian (S-C) pronouns, which are modifiable (as shown in (6)), also show fusional number morphology, as shown in the following nominative paradigm (the other cases are fusional in the same way; Runic 2011, pp. 36–37):

\[(13)\]
\[
\begin{array}{ll}
\text{ja} & \text{mi} \\
\text{ti} & \text{vi} \\
\text{on/ono/ona} & \text{oni/one/ona}
\end{array}
\]

  – This shows that these pronouns realize at least NumP; since these pronouns are modifiable, I conclude that, unlike those in English and Russian, S-C pronouns are actually pro-NumP, rather than pro-DP.\(^3\)

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\(^2\)The Turkish 3pl pronoun *onlar* appears to show regular, agglutinative number morphology; however, it is not completely regular, since there is an extra segment, *n*, which is added as well. I think this can be analyzed as grammaticalization of a once-agglutinative construction, which is now fusional.

\(^3\)As mentioned in Section 1.1, I am remaining agnostic as to the exact nature of the intermediate projections between NP and DP. However, the exact hierarchy of functional projections does not matter here; as long as it can be said that there is some intermediate head which realizes plurality, and that S-C pronouns realize this projection and not DP, my analysis will work.
4 Discussion

• The analysis in the previous section leaves us with three categories of pronoun:

(14) a. Pro-NP: Japanese, Mandarin, Korean
b. Pro-NumP: Serbo-Croatian
c. Pro-DP: English, Finnish, Turkish, Polish, Russian

• As mentioned at the outset, my goal is not only to find the possible syntactic categories that pronouns may realize, but also to predict what category a given language will have, based on other aspects of the language’s syntax.

• This predictability is conceptually necessary from an acquisition point of view, since infants learning the language are evidently able to figure out whether their pronouns will be modifiable in the absence of negative evidence.

• The pro-NP languages listed above form a natural class: They are all East Asian languages, with characteristic properties including the lack of plural morphology and corresponding presence of a classifier system.4

  – This implies that something about having an East Asian-style classifier system ensures that pronouns will realize only NP and nothing more.

  – The exact syntactic property responsible for this connection is unclear at the moment; it will be the target of future research.

• This leaves the pro-NumP and pro-DP languages, which do not form any obvious natural classes.

• So far, all languages which have overt articles have pro-DP. However, Turkish, Finnish, Russian and Polish have no articles yet have pro-DP.

• Since we have a divide within the Slavic family (S-C is pro-NumP, Russian and Polish are pro-DP), any syntactic differences between them are a likely candidate for the key syntactic factor which decides whether a language is pro-DP or pro-NumP.

• In the next section I introduce a syntactic contrast between Russian and S-C, and discuss its potential significance for this project.

5 The Slavic Puzzle

• Russian and S-C (along with other Slavic languages) show an unusual pattern of case and number agreement within quantified NPs (QNPs). When there is a non-paucal numeral (any numeral above 4, compound numerals whose final member is above 4, and certain other

4Borer (2005) notes that plural marking and classifier systems are in complementary distribution, both within and between languages; she explains this by claiming that plural morphemes and classifiers are of the same category, that of division (the lower part of her split NumP).
quantifiers), the head noun and modifiers will (under certain conditions) show genitive case when other cases would be expected.\footnote{Paucal numbers (from 2-4) show both this case mismatch and a number mismatch; furthermore, in at least some dialects of S-C, paucal numbers do not affect case assignment within the NP, contrary to the characterization in Franks 1995 (Ana Werkmann, p.c.). However, for ease of exposition I will stick with non-paucals here.}

- For example, the Russian object NP in (15) has genitive case on the head N and modifier, unlike the accusative case which is expected; likewise for the S-C NP in (16) (Franks 1995, pp. 95–97):

\begin{align*}
\text{(15)} & \begin{array}{c}
\text{čitat'} \quad \text{ pjat'} \quad \text{ interesnyc} \quad \text{ knig} \\
\text{to-read} \quad \text{five.ACC} \quad \text{interesting.GEN.PL} \quad \text{books.GEN.PL}
\end{array} \\
\text{(16)} & \begin{array}{c}
kupili \quad \text{ smo } \quad \text{ pet knjiga} \\
bought.M.PL \quad \text{aux.1PL} \quad \text{five books.GEN.PL}
\end{array}
\end{align*}

- The difference between the two languages lies in the behaviour of QNPs in oblique positions (i.e. receiving a case other than nominative, accusative, or genitive).

  - S-C QNPs behave the same in oblique and non-oblique environments, showing heterogeneous case marking in both cases. For example, in (17), the head noun has genitive plural marking even though the preposition sa ‘with’ assigns instrumental case (Franks 1995, p. 97):

\begin{align*}
\text{(17)} & \begin{array}{c}
\text{sa } \quad \text{ pet djevojaka} \\
\text{with five girls.GEN.PL}
\end{array}
\end{align*}

  - On the other hand, Russian QNPs in oblique environments receive the same homogeneous case marking that ordinary NPs would in the same environment. In (18), the verb vladet’ ‘to-possess’ assigns instrumental case to the following QNP (Franks 1995, p. 95):

\begin{align*}
\text{(18)} & \begin{array}{c}
\text{vladet'} \quad \text{ pjat'ju interesnymi} \quad \text{knigami} \\
to-possess \quad \text{five.INST} \quad \text{interesting.INST.PL} \quad \text{books.INST.PL}
\end{array}
\end{align*}

- Franks (1995) explains these differences in terms of the maximal level of structure which is projected in the two languages: Russian QNPs may realize either QP or DP (with DP dominating QP), while S-C QNPs are always DP.

  - However, this analysis relies on some GB-era mechanisms, such as a contrast between structural and inherent case, and different processes happening at different levels of representation.

  - I am currently trying to determine how this contrast can be formulated in the current Minimalist model. I took the recent account of case assignment in Pesetsky (2013), but it is unclear whether this can account for the S-C pattern in a natural way.

- When an explanation for this contrast emerges, the next step will be to determine whether the relevant property can be used to predict whether languages outside the Slavic family have pro-DP or pro-NumP.
References


Bošković, Ž. (2008). What will you have, NP or DP? *Proceedings of NELS 37*.


