MAIDUAN NOUN PHRASE STRUCTURE

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1 Introduction

In Maidu, a language that was once spoken in the Northern California Sierra, the ordering of nominal elements is as shown below in (1).

(1) Ordering of Nominal Elements
Possessor or Determiner
Numeral
Modifiers
Head Noun

As in English, the possessor and determiner are in complementary distribution, as the examples in (2) show.2

(2) Complementary distribution of possessor & determiner
(a) ?uni-im wepa-im
   prox-ATTR coyote-NOM
   'this coyote'
(b) wepa-ik kyle-im
   coyote-GEN woman-NOM
   'the coyote's wife'
(c) *wepa-ik ?uni-im kyle-im 'coyote's this wife'
    *?uni-im wepa-ik kyle-im '[this coyote's wife]'3

Numerals are rarely used in Maidu for anything but counting, but if they are present as nominal elements, then they appear in the position between the determiner or possessor and any modifiers. This is shown by the examples in (3).

(3) Position of numerals
(a) ?uni-im sapy-im tete-im wepa-im
   prox-ATTR three-ATTR big-ATTR coyote-NOM
   'these three big coyotes'
(b) wepa-ik sapy-im tete-im kyle-im
   coyote-GEN three-ATTR big-ATTR woman-NOM
   'the coyote's three big wives'

Although there is a fairly strict ordering among the different types of modifier (see note 1), I will assume throughout this paper that this ordering is not necessarily structurally defined. By a "structurally defined" ordering I mean that two elements in a hierarchical structure each have a uniquely defined position in that structure. Justification for structurally defined ordering must come from evidence independent of and in addition to relative ordering. Such independent evidence is not available to distinguish the different types of modifiers in Maidu, and so the relative ordering between them can be left structurally undefined.
I do assume, however, that the ordering among the categories of elements in (1) is structurally defined, and the precise structural definition of that ordering is the focus of this paper. Assuming the X-bar theory of phrase structure (Jackendoff 1977 and others), there are (at least) two possible representations of the structure of the noun phrase in natural languages. The first is the representation in which the category N (the noun) is the head of the projection NP (noun phrase). This representation is shown below in (4).

(4) \[ \text{NP-structure} \]

\[
\begin{array}{c}
\text{NP} \\
\{ \text{determiner} \} \\
\{ \text{possessor} \} \\
\text{numeral} \\
\text{modifiers} \\
\text{N}' \end{array}
\]

As shown in (4), the complementary distribution between determiners and possessors is neatly captured in the NP representation because it is structurally defined: both of these elements occupy the same Specifier of N (sister to N') position. However, in this NP-structure, one must assume that both the numeral and modifiers are left Chomsky-adjointed to the N' position. By not giving the numeral a unique position in the NP-structure, its strict order before modifiers is not adequately accounted for. The representation in (4) could have just as easily had numerals ordered after modifiers, in direct contradiction of the facts.

Another representation of the noun phrase available within X-bar theory is one in which the category D (determiner) is the head of the projection DP (determiner phrase). D in turn takes an NP as its Complement, the head of which is N as in (4). This structure consists of two phrases rather than one, and thus has more distinct positions available in it, as shown in (5).

(5) \[ \text{DP-structure} \]

\[
\begin{array}{c}
\text{DP} \\
\text{possessor} \\
\text{D}' \\
\text{D} \\
\text{numeral} \\
\text{modifiers} \\
\text{N}' \end{array}
\]

This representation readily accounts for the ordering between the numeral and modifiers by offering the numeral the unique position of Specifier of N within the structure, with modifiers still left Chomsky-adjointed to N'. However, it seems that this representation lacks the ability to account for the complementary distribution between the determiner and the possessor by not giving them the same structural position. The possessor resides in the Specifier of D position, and D itself is the position for the determiner.
This paper shows that the representation in (5), henceforth 'the DP-structure', is the correct representation for the Maidu noun phrase within current assumptions of X-bar theory, as opposed to the representation in (4), henceforth 'the NP-structure'. This position is supported by independent evidence for a unique position for the numeral in the Maidu noun phrase, presented in §2. §3 is a look at the noun phrase in Nisenan, another Maiduan language, which adds support to the DP-structure as opposed to the NP-structure. Finally, in §4, the complementary distribution between determiners and possessors, not readily accounted for by the DP-structure, is shown to be the effect of an independent principle within the framework of Government and Binding (e.g. Chomsky (1981), henceforth GB), as argued in Abney (1987).

2 A Unique Position for the Numeral

In Maidu, noun phrases consist of many combinations of the ordered elements listed in (1). Although it would seem that the only obligatory element is the head noun, this is not entirely true. What is obligatory is either a modifier or a head noun. Examples of this are shown in (6). The reader is asked to imagine that a Maidu speaker is being asked “At whose houses did you stay?”, with the examples in (6a-b) as possible answers, and the example in (6c) as an impossible answer due to its ungrammaticality.

(6) Modifier or head noun obligatoriness: “At whose houses did you stay?”

(a) wepa-ik pene-im hybo-di
    coyote-GEN two-ATTR house-LOC
    ‘at the coyote’s two houses’

(b) wepa-ik pene-im tete-di
    coyote-GEN two-ATTR big-LOC
    ‘at the coyote’s two big ones’

(c) *wepa-ik pene-di
    coyote-GEN two-LOC
    ‘at the coyote’s two’

What is most interesting about these examples is that they show the striking difference between numerals on the one hand and modifiers on the other. Modifiers are able to be left as the stand-in “head” of the noun phrase if the head noun is missing, as shown in (6a-b), while numerals are not, as shown in (6c). This shows that a distinction between numerals and modifiers is absolutely necessary.

It is clear that only the DP-structure makes the proper structural distinction between numerals and modifiers, by giving the numeral a unique location within the noun phrase. By allowing D to have as its Complement either an NP or a ModP, and by having the numeral occupy the Specifier position of whatever projection is the Complement of D (NP or ModP, with adjunction of subsequent modifiers to either N’ or Mod’), then this necessary distinction is made structurally, a favorable consequence. The structures of (6a) and (6b) are shown below in (7).
With this DP-structure of the noun phrase, it is clear why sentence (6c) is ruled out: if the entire Complement of D is missing, there is nowhere in the structure for the numeral to reside. It must have a Specifier position of either NP or ModP to reside in, and the presence of such a Specifier position entails the presence of the rest of the phrase, head and all. The NP-structure, on the other hand, makes no such prediction, because it fails to make a structural distinction between numerals and modifiers. In the following section it is shown that this distinction is crucial in order to account for the position of the numeral in the Nisenan noun phrase.

3 The Nisenan Noun Phrase

In Eatough's (1991) grammar of Central Hill Nisenan, it is shown that the noun phrase in Nisenan is different than the noun phrase in Maidu in one important respect. The numeral, if any, occurs rightmost in the phrase in Nisenan, as shown in the example in (8).

(8) The Nisenan noun phrase

my-im laj-im pen-i
that child-ATTR two-ACC
'the two children'

To account for this with the NP-structure, where both numerals and modifiers are Chomsky-adjoined to N', one must stipulate that numerals are right Chomsky-adjoined while modifiers are left Chomsky-adjoined, to obtain the structure in (9).

(9) NP-structure (Nisenan)
This type of discrepancy between adjuncions, especially within the same phrase, is virtually unheard of in the X-bar literature. With the DP-structure, all that must be said is that the Specifier of N position branches off to the left in Maidu, while it branches off to the right in Nisenan. These two structures are shown in (10).

\[(10)\] 

\[
\begin{array}{l}
\text{(a) Maidu} \\
\text{DP} \\
\text{possessor D'} \\
\text{D NP} \\
\text{numeral Specifier of N branches off to left modifiers N'} \\
\text{N} \\
\text{(b) Nisenan} \\
\text{DP} \\
\text{possessor D'} \\
\text{D NP} \\
\text{numeral Specifier of N branches off to right modifiers N'} \\
\text{N}
\end{array}
\]

At first, this may seem like the same type of solution offered in (9): the numeral is allowed to "pivot" to the right to account for Nisenan. However, the results are not the same. In (9), a discrepancy is allowed between adjuncions of modifiers and numerals within the Nisenan noun phrase, which as I’ve noted is unheard of in the X-bar literature. In (10), on the other hand, a discrepancy is allowed between syntactic categories in Nisenan. Specifier of N is allowed to branch off to the right in Nisenan, unlike Specifier of D, which branches off to the left.

Unlike the discrepancy in (9), however, this is allowed for by X-bar theory, which claims that languages can individually set the order of the universally unordered pairs of phrasal elements (Specifier, X') and (Complements, X), where X is a syntactic category. Some languages set the order of these pairs across the board, such that one order for each pair is true of each and every syntactic category.\(^5\)

Other languages such as Tzotzil, a Mayan language, can set the order of these pairs in a different fashion. Aissen (1992) shows that Tzotzil has the order X—Complements for all syntactic categories, but that the order of Specifier and X’ depends on whether X is a lexical category (noun, verb, adjective, etc.) or a functional category (determiner, inflection, etc.). Lexical categories are shown to have the order X’—Specifier, while functional categories are shown to have the order Specifier—X’. X-bar theory, then, correctly allows for these and other conceivable discrepancies between syntactic categories, and so the proposal in (10) falls in neatly within the assumptions of the theory.

This look at the Nisenan noun phrase is not simply a comparative one; in that case, the proposals in (9) and (10) are indeed equally valid. The distinction between the proposals can only be seen once it is accepted that the theory of X-bar phrase structure, claiming to be universal, attempts to be as restrictive as is necessary to characterize all and only the natural languages of the world. The parametric ordering of the universally unordered phrasal elements is already necessary within the theory, given the wide variety of word orders in the languages of the world. The discrepancy of ordering between different syntactic categories within a single language is also necessary, given the facts of Tzotzil.\(^6\) This can be seen as a special case of the general ability that languages have of determining the order of phrasal elements. Different types of adjunction within a phrase as in (9), however, cannot be likewise defended, because it allows a wide range of possibilities of adjunction that are simply not attested in the world’s languages.
4 Complementary Distribution (CD) of Determiner and Possessor

I have shown in §2 and §3 that the DP-structure seems to be the best representation of the noun phrase in Maidu within the assumptions of the X-bar theory of phrase structure. However, the problem mentioned in §1 still stands: the DP-structure does not seem to be able to account for the complementary distribution (CD) between the determiner and the possessor, because it does not grant them a common structural position. This CD, though common, does not hold cross-linguistically, and so some form of structure with distinct positions for determiners and possessors is certainly needed within any theory of universal grammar. But if a language like Maidu seems to need to structurally express this CD, then why posit a structure that does not directly express it?

Abney (1987) argues that the DP-structure is the correct representation for the noun phrase in English, where there is also CD between determiners and possessors. The CD, Abney claims, follows from the requirement in GB that phonetically realized noun phrases receive structural case (Case). This is stated as the Case Filter in Chomsky (1981), repeated below in (11). I enclose in brackets the appropriate translation of the Case Filter under the assumption that the DP-structure is the representation of the noun phrase.

(11) The Case Filter (Chomsky (1981))

*NP [*DP], where NP [DP] has a phonetic matrix but no Case.

It is assumed that noun phrase objects (Complements) of verbs receive Accusative Case from the verb. Intransitive verbs, then, can be understood as verbs that cannot assign Accusative Case, and therefore do not take a Complement because the presence of one would violate the Case Filter.

Noun phrase subjects and possessors in English, on the other hand, are assumed by Abney to receive Nominative and Genitive Case, respectively, from the functional categories Infl(ection) and D(eterminer), respectively. Under Abney’s analysis, these noun phrases reside in the Specifier position of these functional categories: subjects in Specifier of Infl, possessors in Specifier of D.

However, it has been known for a while that not all instantiations of Infl assign Case to a subject: the infinitival Infl to presumably does not assign Case, and this is given as partial explanation as to why there are no overt subjects of certain infinitival complements in English such as John wants to go, where the implicit subject of to go is John.

The story goes that to, the only phonetic instantiation of Infl in English, lacks the crucial property of being able to assign Case. This is said to be a direct consequence of the fact that infinitival complements lack agreement: since it is assumed that Infl is the category that carries all agreement features, then to can be said to lack agreement features. Thus, it can be said that Agr(eement) is the property of Infl that assigns Case to Specifier of Infl.

Abney extends these arguments for Infl to the category D. If D also has two types of instantiations, those that have Agr and those that do not (i.e. those that assign Case and those that do not), then the CD between determiners and possessors can be accounted for. If Agr is assumed to be the only element that can assign Case to Specifiers of functional categories, then what can be said is that the phonetic instantiations of D in English, just like phonetic Infl to, lack Agr and therefore cannot assign Case to their Specifiers.

This way, the CD between determiners and possessors is really the surface representation of an underlying CD between two types of D: phonetically realized Ds that lack Agr (the determiners) and hence cannot assign Case to a possessor, and phonetically unrealized Ds that have Agr and thus can assign Case to a possessor. These elements, of course, have the same structural position, which structurally entails that they are in CD.

The same story that Abney gives for English, presumably, can be said for Maidu. Phonetically realized determiners are in CD with phonetically unrealized Agr, which is what must be present to assign Case to a possessor. This is all shown by the structure in (12).

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In this structure, the only way for a possessor to be present in Specifier of D position is for it to receive Genitive Case from Agr in D, which is in CD with the phonetically realized determiners in Maidu. Thus, on the surface, possessor and determiners are in CD.

To conclude, I’d like to mention that the data in Maidu, particularly the structure of the sentence and the structure of modifier phrases, must be more carefully examined in order for any very strong conclusions to be made. However, it seems clear that given the universal assumptions of X-bar theory and the restrictiveness of GB, a working representation of the noun phrase is possible, and this representation is closer to that available with the DP-structure as opposed to the NP-structure.

The adoption of the DP-structure as the representation of the Maidu noun phrase is in line with current assumptions within GB, and the reader is referred to Abney (1987) for further motivation for the DP-structure of noun phrases in English and other languages. The arguments put forth there are very conclusive for English and some other languages, and the data in the Maiduan languages presented here support the hypothesis that the DP-structure is the universal structure of the noun phrase.

Notes

* All data considered in this paper are from William Shipley, personal communication, and from Shipley (1963) and Shipley (1964). All errors are of course my own.

1 What I refer to with the blanket term “modifier” are inherent adjectives and derived adjectives, and other attributive phrases (nominalized predicates and nominal complements). The reader is referred to Shipley (1964:33-37) for more discussion of these and other prenominal elements.

2 In the examples given in this paper, NOM denotes the nominative case marker -im, ACC the accusative -l, GEN the genitive -ik, and LOC the locative -qi. Another marker I will be referring to is the ATTRibutive -im suffix, which marks all prenominal elements except the possessor.

3 The possible grammatical interpretation of the second sentence in (1c) as ‘[[this coyote’s] wife]’ should not be surprising, since the possessor in Maidu can be a full noun phrase with its own prenominal elements.

4 I use ModP here as a cover term for all modifier phrases (see note 1). The internal structure of each type of modifier phrase is not discussed here.

5 English is one of these languages, in which the orders Specifier—X’ and X—Complements are set for all syntactic categories.

6 Many other languages, such as German, exhibit this discrepancy as well. German verb phrases are uniformly right-headed, while prepositional phrases, with only a couple of arguably lexicalized exceptions, are left-headed (hence prepositional).
For instance, Abney (1987:17-18) gives examples from Hungarian, a well-known language without CD between determiners and possessors.

In the sentence *John wants Mary to go*, it is argued that *Mary* receives Accusative Case by Exceptional Case Marking (ECM) from the verb *wants*. This can be seen by substituting *Mary* with a pronoun: *John wants me to go*, *John wants I to go*.

The presence of some type of Agr in the noun phrase is independently motivated for languages that exhibit any type of agreement within the noun phrase (e.g. German, Romance languages).

Notice that even though CD between determiners and possessors is structurally defined in the NP-structure, all these assumptions about Case assignment and Agr do not have clear resolutions assuming that representation of the noun phrase. Case to possessors must be assigned by the lexical category N in the NP-structured noun phrase, and this is in contrast to the assignment of Case to subjects by the functional category Infl in the sentence.

References


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THIS VOLUME IS DEDICATED TO

Professor Margaret Langdon

ON THE OCCASION OF HER RETIREMENT

BY THE MEMBERS OF

The Hokan-Penutian Languages Conference

 FOR

HER MANY IMPORTANT CONTRIBUTIONS TO YUMAN STUDIES

AND FOR

HER ENCOURAGEMENT AND HELP TO ALL OF US.
The 1992 Hokan-Penutian Languages Conference was organized by the Department of Linguistics at the University of California, Santa Barbara, and held at the Museum of Natural History, Santa Barbara, June 27, 1993. The J. P. Harrington Conference was held at the Museum of Natural History, Santa Barbara, June 24-26, 1993. Professor Victor Golla organized the J. P. Harrington Conference.

Presenters from both these groups were invited to submit papers for inclusion in the 1992 Hokan-Penutian volume. Papers from both these groups are included in the volume. The papers appear here in the order that they occurred on the programs. Unfortunately, some papers from these conferences could not be included in this volume. All the papers except the last one were given at one of the conferences. The last paper was to be presented at the Hokan-Penutian Languages Conference, but a family emergency prevented the author from presenting it.

We are grateful to the University of California, Santa Barbara, and Professor Marianne Mithun for organizing the Hokan-Penutian Languages Conference. We are grateful to Professor Victor Golla of Humboldt State University for organizing the J. P. Harrington Conference. Likewise, we are most grateful to the Museum of Natural History, Santa Barbara, its director, and its staff for hosting the conferences and making our stay in Santa Barbara most enjoyable.

As noted on the dedication page, this volume is dedicated to Professor Margaret Langdon of the University of California, San Diego, on the occasion of her retirement. She has been the guiding spirit behind Yuman Studies for some two decades. She established the Yuman Languages Archives at UCSD and organized the first three of the Hokan-Penutian Languages Conferences, which were called at the beginning the Yuman Languages Workshops. She has trained a number of well-known linguists who specialize in Yuman Studies. Her work in historical studies of Yuman and Hokan have benefited us all. She has been adviser, confidant, and helper of us all. We look forward to seeing the publication of the research she is still doing on Yuman.

To a gracious lady, scholar, and friend, we all say: "Thanks, Margaret, and keep on showing us the way in Yuman Studies."

James E. Redden, Editor

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Hinton, Leanne: Margaret Langdon was a pioneer in the field of Yuman linguistics. She dedicated her life to the study of the languages and cultures of the Yuman peoples, doing groundbreaking work on Yuman linguistic structure, morphology, and phonology.

At age 14, Margaret's young life was shattered by World War II. Margaret's mother was killed in a bomb explosion, and she was sent to live with her grandmother in New York. Margaret's only sister, who was six years younger, was sent to live with their mother's sister in the Philippines.

Klar, Kathryn A.: John P. Harrington's Phonetic Representations of Obispeño Chumash Palatal Consonants is a study that explores the phonetic representations of Obispeño Chumash palatal consonants, providing insights into the phonological structure of the language.

Grant, Anthony P.: The Vocabularies of Scouler, Tolmie and Coulter: A Reappraisal is a comprehensive study of the vocabularies compiled by these early explorers, offering a re-evaluation of their contributions to the field of linguistics.

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