

2 Optionality or elimination of one of the articles

The role of the suffixed article can be seen in example (2). If the suffixed article is omitted, the result is an abstract reading (2a). Here, reference is not made to a particular school but to a teacher who is one of the old school. If the intention is to refer to a particular building, i.e. if a concrete reading is intended, then the suffixed article is obligatory (2b). A similar contrast is shown in (3):

- (2) a. Han er en lærer av den gaml-e skole(-n).
he is a teacher of the old-W school-the
'He is a teacher of the old school.'
- b. Vi så på den gaml-e skole*(-n)
we saw at the old-W school-the
'We looked at the old school.'
- (Norwegian; Julien 2005)

- (3) a. Dei oppfører seg som dei verst-e bøll-ar
they behave refl as the worst-W brute-PL
'They behave like the worst brutes'
- b. Dei oppfører seg som dei verst-e bøll-a-ne
they behave refl as the worst-W brute-PL-the
'They behave like the worst brutes'
- (Norwegian; Julien 2005)

In the example without suffixed article (3a), the reading is non-referential, i.e. the speaker does not know who these people are. In (3b), on the other hand, where the suffixed article is present, the speaker refers to specific people. This referentiality of the suffixed article is supported by examples such as the following:

- (4) a. Svensson-s ny-a bil b. bil-en-s ny-a däck
Svensson-GEN new-W car car-the-GEN new-W tyres
'Svensson's new car' 'the car's new tyres'

Abstracting away from the question why and how the genitive can compensate for the preadjectival article, the above example shows that the suffixed article supplies reference to the DP. Proper nouns are inherently referential, as a result the suffixed article is not needed (4a). Example (5a) shows the default structure of modified definite DPs:

- (5) a. Du kan ta den ny-e bil-en. b. Du kan ta ny-e bil-en.
you can take the new-W car-the you can take new-W car-the
'you can take the new car' 'you can take the new car'
- (Norwegian; Julien 2005)

Even if the referent of the DP in (5a) has not been mentioned before, it is clear that there must be a "new car in the universe of discourse" (Julien 2005:33). The

structure without the preadjectival article (5b), on the other hand, would rather be used if the referent is very familiar. The preadjectival article seems to encode what is commonly termed *inclusiveness* (e.g. Hawkins 1978, Lyons 1999, Julien 2005). The co-ordination of two DPs also shows that the preadjectival article is of interpretive value:

- (6) a. den talentfulle akademiker-n og den dyktige administrator-n
the talented academic-the and the accomplished administrator-the
'the talented academic and the accomplished administrator'
- b. den talentfulle akademiker-n og dyktige administrator-n
the talented academic-the and accomplished administrator-the
'the talented academic and accomplished administrator'

(Norwegian; Anderssen 2006)

In (6a) each co-ordinate has a preadjectival article, in (6b) only the first one. (6a) is ambiguous with respect to the number of people, whereas (6b) is unambiguous. This co-ordination structure thus clearly shows that the preadjectival article contributes to the interpretation: it can introduce a further A+N relation.

3 Adjectival inflection

In Standard Scandinavian, attributive and predicative adjectives are inflected. Attributive adjectives show weak inflection, if the DP is definite, and the strong form, if the DP is indefinite.

- (7) a. den grøn-a bil-en b. en grøn- ø bil
the green-W car-the a green-S car
'the green car' 'a green car'

If dialectal variation is taken into account, the phenomenon becomes much more complex. The variation found in the realization of adjectival inflection leads to questions regarding the meaning and function of adjectival inflection, even more so if one considers that adjectival inflection can interact with meaning:

- (8) a. Legg hvert unmoden-t eple i denne kassen.
put every unripe-S apple in this box-DEF
'Put every unripe apple in this box'
- b. Legg hvert unmodn-e eple i denne kassen.
put every unripe-W apple in this box-DEF
'Put each unripe apple in this box'

(Norwegian; Vangsnes 2007)

The pronoun *hvert* ‘each, every’ is compatible with weak or strong inflection. Depending on the adjectival ending, the meaning differs: (8b) has a presuppositional reading but (8a) has not. A similar contrast is shown in the following example.

- | | | |
|-----|-----------------------------------|--------------------------------|
| (9) | a. Mammans egen-ø lilla hemlighet | c. hans egen-a uppträdande |
| | Mummy’s own-s little secret | his peculiar-w behaviour |
| | ‘Mummy’s (own) little secret’ | ‘his peculiar behaviour’ |
| | b. den egen-a torvan | d. hans uppträdande var egen-t |
| | the own-w plot | his behaviour was peculiar-s |
| | ‘one’s own plot’ | ‘his behaviour was peculiar’ |

In (9a), *egen* follows a genitive DP and shows strong inflection, although the context is definite. If the adjective is used in non-possessive contexts (9b), the preadjectival article is triggered and *egen* carries weak inflection. However, if *egen* is used after the genitive/possessive and carries the weak adjectival ending (9c), then the meaning changes (and it can also be used predicatively (9d)).

4 The semantics of the articles and the adjectival inflection

Julien (2005) suggests that the semantic content of the suffixed article is *specificity*: the suffixed article can be omitted, if a non-specific reading is intended and a specific reading is only possible, if the suffixed article is spelled out. I agree with Julien on large parts but consider the term *specificity* somewhat problematic² and thus suggest replacing it with the term *reference*. Although not entirely unproblematic either³, the term *reference* also expresses that the denotation of N+DEF is identifiable and locatable for the hearer (see, for instance, example (3) to illustrate this point):

- (10) THE SUFFIXED ARTICLE brings about reference.

The share the preadjectival article has in the notion of definiteness is commonly called *inclusiveness*. This term was introduced by Hawkins (1978) to express uniqueness of plurality, i.e. to include mass and plural nouns because uniqueness implies singularity. Inclusiveness assimilates uniqueness and is meant to express reference to the totality of the entities that satisfy the description (Lyons 1999:11). In my view, this definition is not precise enough and I suggest specifying the term, at least for Scandinavian DPs (cf. example (6)):

² Indefinite DPs can also be specific.

³ Not unproblematic because of sentences such as ‘He’s always playing the fool’. However, even if this kind of use is often referred to as non-referential, in my view it still refers to a shared concept.

- (11) THE PREADJECTIVAL ARTICLE is inclusive in the sense that it introduces a relationship between adjective and noun and thus limits the range of extensions.⁴

The crucial point is that in establishing a relationship and limiting the range of extensions the preadjectival article introduces an intersection and thus is a set itself. In predicate notation this would be defined as

$$(12) \quad A \cap B =_{\text{def}} \{x \mid x \in A \text{ and } x \in B\}$$

For example, the intersection of sets $A = \textit{yellow things}$ and $B = \textit{cars}$ form a new set that is *the set of all x such that x is a car and is yellow*. $A \cap B$ is a set itself and it is not clear whether this new set is empty or not. This of course leaves us with a problem with respect to definiteness, because definiteness presupposes definition of the members of the set. The examples in section three suggest that the weak adjectival ending actually is the element that fills that gap⁵:

- (13) THE WEAK ADJECTIVAL INFLECTION identifies the member(s) in the set.

The set introduced by the preadjectival article ($A \cap B$) is undefined with regard to its members. What the adjectival ending does is identify, or pick out, the relevant member(s) in the set. In other words: the suffixed article states that the set denoted by the noun is not empty; when an adjective modifies the noun, a new set is introduced, and the weak adjectival ending specifies that the intersection is not empty. But what about structures such as *Vita huset* 'The White House'? The adjectival ending is present, yet the question arises whether *Vita huset* denotes an intersection at all, and if not, why the adjective carries weak inflection. Constructions like *Vita huset* function like compound nouns of the blackbird-type in English, as the change in stress from *vita* to *huset* indicates:

- (14) *det VITA huset* the white HOUSE 'the house is white'
Vita HUSET the WHITE House 'the White House / Washington'

I suggest that structures of this kind are viewed as proper nouns, not as intersections. Therefore, there is no reason for the adjectival inflection to be present. However, proper nouns do not take the suffixed article either, yet the suffixed article is present in structures of the *Vita huset*-kind. Thus I assume that neither the suffixed article nor the adjectival ending are of any semantic import in this kind of structure but that *Vita Huset* forms a complex proper noun.

⁴ This includes that concepts that are familiar to all involved in the discourse do not necessarily have to be introduced as 'new' sets.

⁵ Diachronic observations support this view: weak endings seem to have developed from a PIE noun class that comprised of *individual* objects, the strong ending out of a noun class that contained *abstract/collective* objects.

5 Analysis

The above data suggest that the concept of definiteness comprises three semantic components/ features in modified Scandinavian noun phrases:

- i) preadjectival article: [inclusiveness]
- ii) adjectival inflection: [identity]
- iii) suffixed article: [reference]

Since every component can occur independently of the other two elements, I suggest that each part heads its own phrase, i.e. I assume a split DP in which the preadjectival article and the suffixed article are D-heads, and the adjectival ending the head of a functional projection FP between the two DPs.

Adjectives in Scandinavian carry strong or weak inflection, all in all there are five different endings (weak: -a, -e; strong: -ø, -t, -a). Depending on the context (almost) every adjective can occur with either the weak or the strong ending. If it is assumed that the ending has a particular function, and if it is further assumed that lexical items are not complex heads⁶, the most economical strategy would be to regard both the ending and the stem as independent items that are inserted depending on their morphosyntactic features. This is why I will adopt the framework of Distributed Morphology. Key Features of Distributed Morphology (Halle & Marantz 1994) are:

- LATE INSERTION. Lexical items are spelled out after syntax proper, i.e. terminal nodes in syntax proper lack phonological features. Syntactic, semantic (and morphological) features of the terminal node and the Vocabulary Item respectively serve to identify Vocabulary Items.
- UNDERSPECIFICATION. The identifying features of the Vocabulary Item are a subset of the features at the terminal node.
- SYNTACTIC STRUCTURE ALL THE WAY DOWN. Word formation follows syntactic operations and takes place in syntax or through postsyntactic processes during Morphology. In this model of grammar, Morphology is a “cover term for a series of operations that occur on the PF branch following the point at which the syntactic derivation splits between PF and LF.” (Embick & Noyer 2001:558)

The full syntactic structure I will assume for modified Scandinavian noun phrases is given in (15). The three components of definiteness each head their own phrase (DP₁, FP₁, and DP₂).

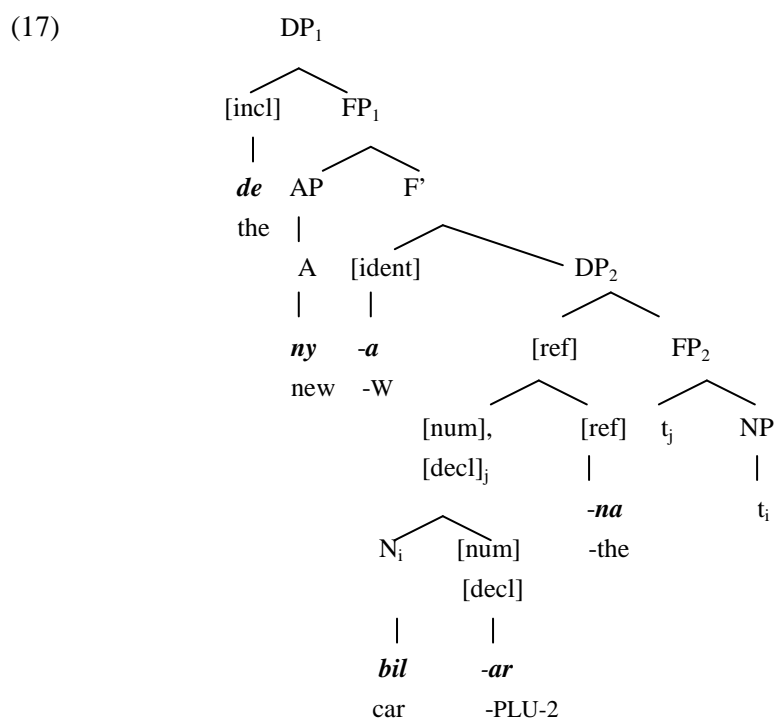
(15) [DP₁ [incl] [FP₁ AP [ident] [DP₂ [ref] [FP₂ [num],[decl] NP]]]]

There has been some debate whether pronominal adjectives should be analysed as heads (‘adjective-as-head analysis’), however, since adjectives in Scandinavian can take complements and phrasal APs can appear pronominal (16), I assume that pronominal adjectives in Scandinavian are APs generated in specifier position.

⁶ This would be very uneconomical: for every adjective, three forms would have to be accessible: SING strong, SING weak, PLU strong/weak

- (16) en för rockkonserter olämplig lokal
 a for rock concerts unsuitable venue
 ‘an unsuitable venue for a rock concert’ (Holmes&Hinchliffe 2003:456)

In non-modified DPs (see DP₂ in (17)), the head of NP head-adjoins to the head of FP₂ and then to the head of DP₂⁷. These operations occur in Morphology, i.e. they are post-syntactic. The operations are triggered by the identification of the features at the terminal node and the respective Vocabulary Item (cf. Late Insertion). If the DP is modified by an adjective, the AP is generated in Spec,FP₁. Additional movement operations are not necessary since [incl] and [ident] are identified by the insertion of matching Vocabulary items.



For varieties of Scandinavian that do not make use of double definiteness and/or show different realizations of adjectival inflection, I hypothesize that the structure of the DP may be less extended and that feature bundles may be found, for instance, on only one terminal node, and this probably higher up in the tree, i.e. definiteness would then be realized with the help of only one morpheme.

This is only a first attempt of an analysis within the framework of Distributed Morphology. More work needs to be done to account for the considerable inner-Scandinavian and dialectal variation that is found in both the realization of definiteness and the realization of adjectival inflection. It would also be very desirable to find out more about the exact nature of the feature bundles that

⁷ The marker *t* does not represent traces, it is only meant to show the movement operations the respective elements undergo.

constitute the terminal nodes and so to come to a better understanding of the different elements DPs comprise and of the interaction of these elements.

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