

**Collective Numeral Constructions in Dutch:
Remarkable Plurals, Regular Syntax and Silent Nouns**

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Abstract: In this paper, we discuss some collective numeral constructions from Dutch, which display a remarkable plural morpheme *-en*: *wij vieren* “the four of us”, *met ons vieren* “with four” and *met z’n vieren* “with four”. We argue that these at first sight idiosyncratic constructs are formed in syntax by application of the regular syntactic rules: Merge and Move. A central claim we make is that these collective numeral constructions contain a silent noun *PERSOON/PERSON* (cf. Kayne 2002, 2003, 2007). Although the noun itself is silent, its plurality is realized as *-en*. The silent noun is licensed by a local (i.e. DP-internal) antecedent. Dialectal variation in the realization of these constructions is analyzed in terms of “externalization”. It is argued that the basic syntactic make-up is similar in all variants. It is the (morpho-) phonological realization of heads, which causes the differences at the surface.

Keywords: DP, silent noun, numerals, plural, inflectional morphology, micro-variation.

1. Introduction: the empirical problem¹

In present-day standard Dutch, attachment of the plural suffix *-en* to a noun is one of the regular strategies for noun pluralization. The suffix typically follows stems ending in a stressed syllable (Booij 2002).²

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² Besides the plural suffix *-en*, we find the plural suffix *-s* in Dutch. The latter suffix typically appears after unstressed final syllables, as in *lepel-s* (spoon-s), *keuken-s* (kitchen-s), *emmer-s* (bucket-s). Besides *-en* and *-s*, Dutch has the plural suffix *-eren*, which historically is a sequence of two plural morphemes, viz. *-er* and *-en*. The use of this plural suffix is restricted to a small set of words, among which: *ei-eren* (egg-s) and *lied-eren* (song-s). See Van Haeringen (1947), Booij (2002) and Van Wijk (2007) for more detailed discussion of the distribution of plural formation on nouns in Dutch.

- (1) a. *een boek* b. *twee boeken*
 one book two book-en
 “one book” “two books”

As shown in (2), the plural suffix *-en* also combines with numerals such as *honderd* (one hundred), *duizend* (one thousand), *miljoen* (one million) and *miljard* (one billion), which suggests that these numerals are noun-like (see Jackendoff 1977, Corver & Zwarts 2006):

- (2) *honderden studenten*
 hundred-en student-en
 “hundreds of students”

Importantly, the suffix *-en* that is attached to the numeral *honderd* expresses the plurality of the numeral. That is, *honderden studenten* means ‘x-times one hundred students’, whereas *honderd studenten* means ‘(exactly) one hundred students’.

Attachment of *-en* to numerals, however, does not always express plurality of the numeral. Consider, for example, the following constructions:

- (3) a. ***Wij tweeën*** *geven vandaag een lezing.*
 We two-en give today a talk
 “The two of us give a talk today.”
 b. Ze heeft ***ons tweeën*** niet herkend
 She has us two-en not recognized
 ‘She didn’t recognize the two of us.’

- (4) *We schrijven met z’n negenen een artikel.*
 We write with poss-pron nine-en an article
 “The nine of us are writing an article.”

The suffix *-en* in example (3) does not express plurality of the numeral *twee* (i.e. ‘x-times two’). Similarly, the construction in (4) by no means implies that there are

several numbers of nine. Notice, moreover, that the shape of the numeral nine in (4) is not its ‘normal’ plural form:

- (5) a. **Hij heeft drie negenen op z'n rapport.*
He has three nine-en at his report
- b. *Hij heeft drie negens op z'n rapport.*
He has three nine-s at his report
“He has three nines at his report.”

The peculiar distribution of the plural suffix *-en* in (3)-(4) raises the questions (i) what the status and function of this suffix is, and (ii) what the syntactic structures of these constructions are.

Given that this “irregular” use of suffix *-en* is restricted to a limited number of idiosyncratic constructions, the question arises whether these constructions should be syntactically analyzed at all. Booij (2005) takes a Construction Grammar perspective on these data and argues that the constructions are not formed in syntax but are stored as complex lexical units in the lexicon. In this paper we take a syntactic approach. We propose that the suffix *-en* expresses plurality in those idiosyncratic constructions as well. Furthermore, we show that these constructions have a regular syntactic structure and should not be stored in the lexicon. In the line of Kayne (2002, 2003, 2007), we will argue that their at first sight peculiar behavior is explained in terms of the presence of a silent noun. More specifically, we argue that the constructions in (3)-(4) feature the silent noun PERSON. The plural suffix *-en* is attached to this silent noun and expresses its plurality.³ Thus, although at the sound surface *-en* appears attached to the numeral, the plural suffix has a ‘regular’ distribution at the level of morphosyntax, i.e. it appears attached to a noun.

Besides providing an analysis of the morphosyntax of these constructions in standard Dutch, we will also consider the microdiversity of these constructions; that is, what cross-dialectal variation is attested in these ‘special’ nominal constructions. Starting from Chomsky’s (2001) Uniformity Principle, which states that “In the absence of

³ See also Leu (2008) for illustrations of morphological elements that attach to silent nouns.

compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances”, we will show that much of the attested variation follows from ‘externalization’, i.e. the morpho-phonological realization of the syntactic representation.

The article is organized as follows: Section 2 gives some general background on the concept of silent nouns. In section 3, we provide a first analysis of the collective numeral constructions (examples (3) and (4)), taking a ‘silent noun’ perspective on these constructions. Section 4 provides a more in-depth syntactic analysis of the two constructions. Section 5 presents a discussion of the dimensions of (Dutch) microdiversity attested in these construction types. Section 6 concludes the paper.

2. *Some background on silent nouns*

In Kayne (2002, 2003, 2007), a class of nouns is identified which are qualified as so-called *silent nouns* (orthographically distinguished from other nouns by using CAPITALS, henceforth). Silent nouns are phonetically unrealized nouns, which are nevertheless active in syntax and interpretation.

The proposal that syntactic representations include syntactically available but phonetically unrealized heads explains many phenomena that seem fully arbitrary otherwise. One of the silent nouns Kayne presupposes is NUMBER. Consider the following examples:

- (6) John has fewer books than Bill.
- (7) John has the fewest books of anybody I know.

The fact that *few* can bear a comparative or a superlative morpheme suggests that it is an adjective. However, if *few* were an adjective modifying the noun *books*, the grammaticality of the phrases in (8) and (9) in contrast with the unacceptability of (10) and (11) would come as a surprise:

- (8) a few books
- (9) every few days

- (10) *a books
 (11) *every days

A and *every* cannot be interpreted as a determiner/quantifier of the nouns *books* and *days*, respectively. However, they cannot ‘belong to’ the adjectives either:

- (12) *a green
 (13) *every green

To explain these facts, Kayne proposes that these constructs contain a silent noun NUMBER, with which *few* and the determiner/quantifier enter into a syntactic relationship:

- (14) a few NUMBER books

Besides NUMBER, Kayne proposes other silent nouns such as PERSON, PLACE, HOUR and CLOCK.⁴ These silent nouns can have grammatical ϕ -features. Consider, for example, the following temporal construction from Italian (Kayne 2003):

- (15) *dopo le quattro*
 after the [fem. pl.] four
 “after four o’clock”

The determiner *le* is neither the default determiner, nor a ‘specifier’ of the numeral. *Un quattro* “a four” is masculine in Italian. Rather, determiner *le* agrees with the plural noun *ore* “hours”, which can be optionally realized:

- (16) *sono le (ore) quattro*
 it is the [fem. pl.] hours [fem. pl.] four
 “it is four o’clock”

⁴ See also De Belder (2007) for evidence (from Dutch) for the existence of silent nouns, more specifically the silent noun DAY. In Corver (2007, 2008), it is argued that a silent noun PERSON can be found in possessive noun phrases of certain dialects of Dutch.

Given this agreement relationship, it is a natural assumption that the expression in (15) contains a silent HOURS with the feature set [feminine, plural] as well:

(17) dopo le ORE/HOURS quattro

An important consequence of the hypothesis that human language, more specifically the lexicon of a language X, distinguishes a class of silent nouns is the fact that syntactic constructs with an apparently irregular morphosyntax turn out to have a regular morphosyntax at a more abstract level. More specifically, these constructs have a syntactic representation which is built by the computational rule system of language X (i.e., Merge and Move), which takes the lexical items of language X — including its silent grammatical nouns — as its lexical input. Thus, these superficially ‘special’ syntactic constructs are not stored as ‘fixed’ units (‘constructions’) in the lexicon. Rather, they are simply the product of the interplay between the computational system of human language and the lexicon.

In what follows, we will analyze two types of nominal constructions featuring ‘remarkable’ plural morphology on a numeral (see (3)-(4)). In our analyses of these constructions we will identify a silent noun, which is the carrier of plural morphology.

Section 3. The syntax of collective numeral constructions

Having introduced the theoretical notions of (silent) grammatical nouns, we argue in this section that there is a silent noun PERSON present in the syntactic structure of the collective numeral constructions in (3) and (4), which are repeated here as (18) and (19), respectively:

(18) *Wij tweeën geven vandaag een lezing.*

 We two-en give today a talk

 “The two of us give a talk today”

(19) *We schrijven met z’n negenen een artikel.*

 We write with poss-pron nine-en an article

 “The nine of us are writing an article”

3.1. Collective numeral constructions as syntactic constructs

It was questioned in the introduction already, whether the idiosyncratic constructions under discussion should be decomposed syntactically. Rather, they could be fixed constructions that are lexically inserted in syntax as a whole (cf. Booij 2005). However, there are a number of arguments that seem to favor a syntactically decompositional approach.

Taking the construction in (19) as our starting point, it should be noted in the first place that there is a syntactic dependency relation between the weak possessive pronoun *z'n* and the clausal subject *we*. The latter element functions as the antecedent of the weak pronoun. Notice at this point that, besides the weak pronoun *z'n*, we can also have a full pronominal form (e.g. *ons* 'us').⁵ This is exemplified in (20) and (21):

- (20) *We komen met z'n vieren*
we come with poss.3sg.m.weak four-en
- (21) *We komen met ons vieren*
we come with us four-en
“we come with four”

In (21), the antecedent *we* and the possessive pronoun *ons* also enter into an agreement relationship: i.e., there is agreement in person (1st person) and number (plural). In (20), this agreement relation appears to be absent: *z'n* is a third person singular pronoun, as in *z'n vrienden* 'his friends'. The question, obviously, needs to be addressed as to why *z'n* is possible in this context. We will try to answer this question later in this article. For the moment, we restrict ourselves to the statement that the interpretive and agreement dependency between the antecedent and the possessive pronoun is suggestive for the 'accessibility' of material contained within a construct like *met z'n vieren* to syntactic processes.

⁵ As we will show later, the full pronominal form *ons* in (21) is a personal pronoun, whence the translation 'us'. This means that the nature of the pronominal elements *z'n* and *ons* in (20) and (21) is different.

A second argument showing that a pattern like *met z'n vieren* is a syntactically derived construct rather than a lexical unit comes from ‘modification’. In various Dutch dialects, the numeral can be part of a complex comparative phrase. This is exemplified by the following sentences from Oostkapelle Dutch.⁶

(22) *We komen met zun meer as tiene.*
 We come with poss-pron more than ten-e
 “We come with more than ten people.”

(23) *We komen met zun minder as tiene.*
 We come with poss-pron less than ten-e
 “We come with less than ten people.”

These examples show that the numeral which is part of this construction can have a complex phrasal syntax; i.e., *met z'n meer/minder as tiene* besides the simplex form *met z'n tiene*. This ‘expansion’ of the numeral suggests that syntax is involved and that these constructions cannot be simply stored in the lexicon.

3.2. A silent noun **PERSOON/PERSON**

3.2.1 Evidence for silent **PERSOON/PERSON**

In the spirit of Kayne (2002, 2003, 2007) we propose that the constructions *wij tweeën* in (18) and *met z'n negenen* in (19) contain a silent noun **PERSOON**. It is this silent noun which carries the plural suffix *-en*. This means that the two constructions receive the following global analyses:

(24) a. *wij twee PERSOON-en*
 b. *met z'n negen PERSOON-en*

The proposal that *-en* spells out the plural feature of a silent noun **PERSOON/PERSON** receives support from the fact that the surface pattern *NUM-en* cannot appear when it has a singular interpretation. This is exemplified in (25), where the numeral *een* ‘one’ forces a singular meaning.

⁶ These data are drawn from the DiDDD-database (Diversity in Dutch DP Design). For a description of this research project on microvariation in the Dutch noun phrase, see Corver et al. (2007).

- (25) **Hij komt in z'n een-en*
 he comes in poss-pron one-en
 “He comes alone.”

One might object that this does not necessarily show that *-en* is a plural affix, but rather that this construction is different and maybe does not contain a silent noun at all. However, just like other numerals (cf. (26)), *een* “one” can be followed by a diminutive affix (cf. (27)):

- (26) *We komen met z'n viertjes*
 We come with poss-pron four-dim-pl
 “We come with four.”

- (27) *Hij komt in z'n eentje*
 He comes in poss-pron one-dim
 “He comes alone.”

This similar distribution of the diminutive suffixes in (26) and (27) suggests that the patterns *met z'n vieren* and *in z'n eentje* are essentially the same. Given the fact that diminutives typically attach to nominal roots, we take the ‘underlying’ structure of *in z'n eentje* to be the following: *in z'n een* PERSOON-tje. The internal syntax of the construction *met z'n viertjes* is comparable: *met z'n vier* PERSOON-tje-s.

Note, that this approach according to which plural and diminutive morphology is attached to a silent noun PERSOON easily extends to other quantitative constructions:⁷

- (28) *met hun allen* (= met hun al PERSOON-en)
 with their all-en

⁷ Another nominal construction that arguably features a silent noun PERSOON comes from the domain of reflexivization. A possessive reflexive like *z'n eigen* “his own”, which is attested in many dialects of Dutch, plausibly has a structure in which a silent noun PERSOON is present:

- (i) *Jan slaat z'n eigen*
 Jan beats his own
 “Jan beats himself.”
- (ii) *Jan slaat [z'n eigen PERSOON]*

- “all together”
- (29) *met hun beiden* (= met hun beide PERSOON-en)
 with their both-en
 “with the two of them”
- (30) *met hun beidjes* (= met hun beid(e) PERSOON-je-s)
 with their both-dim-pl
 “with the two of them”
- (31) *met hun hoevelen* (= met hun hoeveel PERSOON-en)
 with their how many-en
 “with how many people?”

3.2.2 A non-silent grammatical noun *persoon*

The assumption of a silent noun PERSOON/PERSON in constructions such as *wij tweeën*, *met z'n negenen* and *in z'n eentje* raises the question as to whether there is any evidence for an overt counterpart *persoon* “person” in Dutch.

In Corver (2007, 2008), evidence is given for the existence of a phonologically overt noun *persoon* in Dutch on the basis of possessive constructions like (32).⁸

- (32) a. *Jan gaf mij informatie over [Anna's persoon]*
 Jan gave me information about Anna's person
 “Jan gave me information about Anna.”
- b. *Er doen allerlei verhalen rond [zijn persoon]*
 There do all-sorts-of stories around his person
 “All sorts of stories go around about his person.”

Corver characterizes the noun *persoon* in (32) as a ‘grammatical noun’, in the sense of Emonds (1985, 2000). A grammatical noun is a noun with little descriptive contents,

⁸ Corver argues that an expression like *Anna's* in (i) is a possessive noun phrase featuring a silent grammatical noun PERSOON, which acts as the possessum; see (ii). In standard Dutch, a construction like (i) is impossible.

- (i) We kwamen [Anna's] tegen (Alblasserwaard Dutch)
 We met Anna's PRT
 ‘We met Anna.’
- (ii) [Anna's PERSOON]

whose lexical specification contains no purely semantic features *f* (e.g. [artifact]), but only cognitive syntactic (i.e. formal) features (e.g. +/-N, +/-V, +/-PROXIMATE, +/-PLURAL; see Chomsky 1965).⁹ For English, Emonds identifies the following lexical items as members of the (closed) class of grammatical nouns (GNs):

(33) *self, one, body, people, thing, place, reason, time, way.*

We will assume that, in Dutch, both the non-silent noun *persoon* and its silent counterpart *PERSOON* fall within the class of grammatical nouns. We will come back to the grammatical behavior of grammatical nouns in section 3.2.3. In this sub-section, we will concentrate on the behavior of the Dutch grammatical noun *persoon*.

Considering the examples in (32), we observe that the expression *Anna's persoon* in (32a) is an indirect way of referring to the individual *Anna*. The same holds for *zijn persoon* in (32b), which can be paraphrased as *hem* 'him'. That a phrase like *zijn persoon* functions as an interpretive unit is also clear from the following examples:

- (34) a. *Bush betreurde de kritiek op [zijn persoon]*
Bush regretted the criticism of his person.
b. *Bush betreurde de kritiek op hem*
Bush regretted the criticism of him.
- (35) a. *[Zijn_j moeder] waarschuwde Jan_j*
His mother warned Jan.
b. **[Zijn_j persoon] waarschuwde Jan_j* (*zijn persoon* = 'he')
His person warned Jan.
c. **Hij_j waarschuwde Jan_j*
He warned Jan.

In (34), *zijn persoon* enters into a relation of coreference with *Bush* and can be paraphrased by the pronoun *hem*. That *zijn persoon* functions as a single unit at the level of coreference is clear from the examples in (35). While it is possible for the possessive pronoun *zijn* to enter into a coreference relationship with the direct object

⁹ A grammatical noun may alternatively be characterized as 'a light noun' or 'a semi-lexical noun'; see Corver & Van Riemsdijk (2001).

Jan in (35a), this turns out to be impossible for *zijn persoon* in (35b). In a way, the ill-formedness is quite similar to the principle C violation in (35c), where the subject pronoun c-commands the proper name.

Another fact that displays that the grammatical noun *persoon* ‘person’ is different from lexical nouns is that this grammatical noun cannot be modified by attributive adjectives (cf. (36)), whereas the potential to be preceded by adjectives is one of the most characteristic properties of lexical nouns (cf. (37)):

(36) *Op het internet staat veel over zijn (*vriendelijke) persoon*
 At the internet stands a lot about his friendly persoon
 “The internet contains a lot of information about him.”

(37) *In de taalkunde werken alleen vriendelijke personen.*
 In the linguistics work only friendly people
 “In linguistics, only friendly people are employed.”

Further support for the semi-lexical status of *persoon* in (32) comes from coordination. As shown by (38), *persoon* cannot be coordinated with a lexical noun. Nor is it possible to coordinate the entire phrase *zijn persoon* with a noun phrase headed by a lexical (i.e. semantically contentful) noun; see (39).¹⁰

(38) a. *Jan kende [Anna’s zoon en dochter]*
 Jan knew [Anna’s son and daughter]
 “Jan knew Anna’s son and daughter.”
 b. **Jan kende [Anna’s persoon en dochter]*
 Jan knew Anna’s person and daughter

(39) a. *Jan kende [[zijn broer] en [zijn moeder]]*
 Jan knew [[his brother] and [his mother]]
 “Jan knew his brother and his mother.”

¹⁰ Coordination with another N(oun Phrase) turns out to be possible if the second noun refers to an action or state involving the ‘person’.

(i) Er verschenen in de kranten allerlei commentaren op [*zijn persoon en werk*]
 There appeared in the journals all-sorts-of commentaries on his person and work

- b. **Jan kende* [[*zijn persoon*] *en* [*zijn moeder*]]
 Jan *knew* [[*his person*] *and* [*his mother*]]

Summing up, the grammatical noun *persoon* in (32) shows different syntactic behavior than lexical nouns such as *vriend* ‘friend’, *vrouw* ‘woman’, or the lexical (i.e. descriptively contentful) noun *persoon* (see (37)), for that matter. As hinted at in this section, we will assume that both non-silent *persoon* and silent *PERSOON* fall within the class of grammatical nouns.

3.2.3 Silent nouns as carriers of morphology

Thus far, we have tried to give evidence for the existence of a silent noun *PERSOON*, which can act as a carrier of the plural morpheme *-en*. It goes without saying that normally the nominal host carrying plural morphology is phonetically overt (i.e. non-silent). In view of this, one might raise the question as to whether it is theoretically desirable to allow plural morphology on silent nouns.¹¹ In this context, one might refer to the morphological behavior of zero-derived words. A well-known constraint on zero-derivation, known as Myers’s generalization (1984), is the one in (40):

(40) *Myers’s Generalization*

Zero-derived words do not permit the affixation of further derivational morphemes.

According to this constraint, a zero-derivational morpheme may not be followed by another derivational suffix. Myers’s evidence for this constraint on morphological operations comes from words like *support*, which categorically has a dual status: it

¹¹ Notice that the approach sketched out here departs from Kayne’s (2003) analysis of plural ORE as a silent noun (see (16)). In ORE, plural morphology seems to be part of the silence. We will tentatively assume that this is somehow related to the inflectional nature of inflectional morphology in a language like Italian (and Romance in general). More specifically, inflectional morphology in a language like Dutch is possibly more ‘agglutinative’ than in a language like Italian. Interestingly, Kayne (2003) points out some constructions from English in which, according to him, the plural morpheme *-s* is attached to a silent noun:

- | | | | |
|-----|----|--------------------------|-----------------------|
| (i) | a. | the others | (= the other ONE-s) |
| | b. | in the eighties | (= the eighty YEAR-s) |
| | c. | John bought three wines. | (= three wine KIND-s) |

can be a Verb, as in *John supports me*, or a Noun, as in *John's support*. As Myers notes, only one of the categorizations (*in casu* V) allows the affixation of the derivational morpheme. The verb *support*, for example, yields the derived adjective *support-ive*. The noun *support*, on the contrary, does not permit any derived forms: e.g. **supportial*, **supportious* (see Pesetsky (1995: 76). It is the nominal category *support*, being a zero-derived word, which does not permit further derivational affixation. Schematically:¹²

(41) *[[[support_V] ø_N] ial_A] (ø = zero-morpheme)

As is clear from the formulation in (40), Myers's constraint only holds for phonologically zero derivational morphology.¹³ That is, attachment of inflectional morphology to zero-derived words is possible. A clear illustration of this is the Dutch verb *computert* in (42), which is a zero-derived form taking the noun *computer* as its base (see (43)):¹⁴

(42) Mijn zoon computert de hele dag
 My son computer-s the entire day

¹² To be more precise, we should point out that Myers argues that zero derivation does not involve affixation of a phonologically null morpheme (see Pesetsky (1995) for a view in which zero-derivation does involve the presence of a null-morpheme). He proposes that zero-derived forms result from affixation of inflectional material that is characteristic of category A to a root belonging to category B. For example, the derived noun *mortals* does not have the representation in (ia) but rather the one in (ib). That is, the inflectional plural morpheme *-s* directly attaches the adjective and turns the complex word into a Noun.

(i) a. [[mortal_A] ø_N] -s_N
 b. [[mortal_A] -s_N]

¹³ As noted by Pesetsky (1995), there are exceptions to Myers's generalization. For example, the adjectivizing derivational suffix *-able* and the nominalizing agentive derivational suffix *-er* can attach to verbs that are zero-derived from nouns. This is shown by the examples in (i), taken from Pesetsky (ibidem):

(i) a. accentable a.' accenter (Noun: accent)
 b. documentable b.' documenter (Noun: document)
 c. enviable c.' envier (Noun: envy)

¹⁴ Another potential example of a zero-headed verb carrying inflectional morphology is the verb *saddles* in (ia), which, according to the analysis given in Hale & Keyser (1993), has the structure in (ib); i.e., the noun *saddle* is incorporated into the phonologically empty (i.e. silent) verb PUT.

(i) a. John saddles the horse
 b. [[saddle_N] PUT]-s]

“My son is playing behind the computer all day.”

(43) [[[computer_N] \emptyset _V] t_V] (\emptyset = zero-morpheme)

Observe at this point that the zero-derived patterns that are central in this article also involve inflectional (rather than derivational) morphology: a plural morpheme *-en* is attached to a silent noun. In other words, inflectional morphology seems to have a different status with respect to zero-derivation than derivational morphology has.¹⁵

This brings us back to the initial question as to why inflectional morphology is possible on silent nouns. Let us first of all point out that, strictly speaking, the presence or absence of sound on the root category seems to be less relevant for the possibility of combining a root with an inflectional morpheme. For the attachment of the plural inflection *-en*, the most crucial property of the host seems to be the categorial information that it is a noun (i.e. [+N,-V]): plural morphemes combine with nouns, and not, for example, with adjectives or prepositions. Whether the noun consists of many or few sound segments is irrelevant (e.g. *aal* – *aal-en* (eel, eels) and *bacchanaal* – *bacchanal-en* (bacchanal, bacchanals). From this, one might conclude that even the absence of sound segments does not, in principle, block the combination of a noun with a plural morpheme.¹⁶

A second factor that we consider to be relevant at this point concerns the ‘lexical’ status of the silent noun. In the line of Emonds (1985, 2000), we do not consider these nouns to be regular, ‘descriptive’ (i.e. semantically contentful) nouns. We rather analyze them as what Emonds calls ‘grammatical nouns’. In section 3.2.2, those nouns were characterized as (functional) nouns whose lexical specification contains no purely semantic features *f* (e.g. [artifact]), but only cognitive syntactic (i.e. formal)

¹⁵ Arguably, even derivational morphemes should be able to adjoin to a zero-noun in view of forms such as *viertjes* in (26). We assume that, in *viertjes*, the diminutive suffix *tje* is attached to the silent noun.

¹⁶ Importantly, we say that the categorial information (i.e. the [+N,-V]-status of the host) is the crucial information for the attachment of the plural morpheme (i.e. the combinatorics). We do not intend to say that phonology does not play any role in the morphophonological realization of the plural morpheme. In Dutch, for example, the stress pattern of the host determines the choice between two competing plural suffixes (cf. Van Haeringen 1947; see also Booij 2002, Van Wijk 2007). The basic generalization, exemplified in (i), is the following: the plural morpheme *-s* appears after an unstressed syllable, whereas the plural morpheme *-en* appears after a stressed syllable.

(i) a. kánon ‘canon’ kánon-s (unstressed final syllable)
b. kanón ‘gun’ kanónn-en (stressed final syllable)

features F (e.g. +/-N, +/-V, +/-PROXIMATE, +/-PLURAL). As pointed out by Emonds (1985, 2000), an important property of those grammatical nouns (and grammatical categories in general) is that they may display ‘special’ grammatical behavior (*unique syntactic behavior* in Emonds’s terms). This is illustrated in (44) and (45), where the (a)-examples show the behavior of the lexical noun *thing* and the (b)-examples the behavior of the grammatical noun *thing*.

- (44) a. I bought some things. (plural formation)
 b. *I bought somethings. (no plural formation)
- (45) a. I bought [some nice *thing(s)*] (no N-to-D)
 b. I bought [some+*thing*; nice t_j] (N to D raising across an adjective)

(44a) shows that lexical *thing*, being [+count], can be pluralized. This is impossible with the [-count] grammatical noun *thing*, as shown by (44b).¹⁷ A further distinction regards displacement: the grammatical noun *thing* is able to undergo N-to-D raising across an attributive adjective, yielding the surface pattern *some+thing nice* (cf. (45b)). This movement step is impossible with the lexical noun *thing*; see **some things nice*. The only possible order is that in (45a).

As argued for in section 3.2.2, we propose that the silent noun *PERSOON* falls within the class of grammatical nouns. We consider their ability to combine with a non-silent (i.e. phonetically overt) inflectional suffix as a further illustration of the special grammatical behavior of this closed class of grammatical nouns. ‘Normal’ (i.e. descriptive) nouns typically do not permit attachment of (inflectional) morphology to a phonetically unrealized counterpart.

- (46) a. Jan sprak met [één vrouw] en Kees sprak met [twee vrouwen]
 Jan spoke with one woman and Kees spoke with two women.

¹⁷ The absence of plural morphology is not an overall property of grammatical nouns. For example, grammatical nouns such as *one* and *self*, which are not incorporated into a Determiner-like element, can carry plural morphology:

- (i) John’s good one-s
 (ii) ourselve-s

- b. *Jan sprak met [één vrouw] en Kees sprak met [tweeën]
 Jan spoke with one woman and Kees spoke with two-en
 “Jan spoke with one woman and Kees spoke with two (women).”

In view of the similarity of grammatical nouns to functional categories, it might be interesting to point out that the appearance of overt inflectional morphology on a phonetically empty head is attested in the domain of complementizers as well. The phenomenon we have in mind is that of complementizer-agreement, which is found in a variety of Dutch dialects (see among others Van Haeringen 1939, 1958). This phenomenon is illustrated in (47); examples are drawn from Van Haeringen (1958).

- (47) a. Vraag es ovve ze vanavond komme
 Ask PRT whether-*e*_[+plural] they tonight come
 “Ask whether they will come tonight!”
- b. Ze ken niet mee, omdatte de kindere ziek benne
 She can not with, because-*e*_[+plural] the children ill are
 “She can’t join us because the children are ill.”

In these examples, the complementizer (*ov*, *omdat*) displays the same agreement morphology as the finite verb (*komme*, *benne*).¹⁸ Consider now the following examples:

- (48) a. jongens dieë van anpakke wete
 boys who-*e*_[+plural] of work know
 “boys that know how to work”
- b. Ik weet niet watte we d'ran doen motte
 I know not what-*e*_[+plural] we there-aboutdo must
 “I don’t know what we should do about it.”

In these examples, the inflectional plural morpheme superficially (i.e. at the sound surface) appears attached to the relative pronoun *die* in (48a) and the wh-pronoun *wat* in (48b). Given the fact that these pronouns appear in [Spec,CP], it has been argued

¹⁸ The question of what the correct analysis of complementizer-agreement is falls beyond the scope of this article. For recent proposals, see among others Zwart (1996), Carstens (2003), Van Koppen (2005).

that the inflectional morpheme *-e* in those cases is spelled out on a zero-complementizer (i.e. a silent C). In other words, the examples in (48) are an illustration of the appearance of inflectional morphology on a zero-head. Schematically:

(49) [CP wat/die [C' [C \emptyset _[+plural] (= *-e*)] [TP]]]

Thus, the presence of inflectional morphology on a zero-head is attested. More specifically, zero-complementizers can bear an inflectional morpheme. The ability of a silent head to carry inflectional morphology thus seems to be restricted to lexical items that belong to what we may call the ‘functional side’ of the lexicon; i.e., ‘core’ functional categories and Emonds’s ‘grammatical categories’. In Emonds’s (2000) theory of the Lexicon (2000), a division is made between the so-called *Dictionary* (i.e., that part of the lexicon where open class lexical items are stored) and the so-called *Syntacticon* (i.e., that part of the lexicon where all closed class item are stored). Grammatical categories, both non-silent and silent ones, fall within the latter part of the lexicon.¹⁹

Summarizing, we have argued that the realization of inflectional morphology on a zero (i.e. silent) noun is restricted to a specific class of nouns, viz. grammatical nouns in the sense of Emonds (1985, 2000). One of the characteristics of this lexical class is their ‘special’ grammatical (i.e. syntactic, morphological) behavior. We argued that the ability of certain silent grammatical nouns to carry inflectional morphology is a further illustration of their special status and behavior.

3.2.4 On the licensing of silent nouns

¹⁹ Emonds (2005:117) contains the following statement: ‘*Null Morphemes*: Only Syntacticon items can be phonetically empty.’ In other words, null (i.e. silent) morphemes are not attested in the Dictionary. This idea is reminiscent of (certain versions of) Distributed Morphology (cf. Halle and Marantz 1993), where a distinction is made between $\sqrt{\text{ROOTS}}$ (Roots), i.e. lexical items of the open class vocabulary, and functional categories. The former are (phonologically) present in the syntactic derivation, the latter are inserted late in the derivation (i.e., at PF). See also Emonds (1985, 2000) for the idea that functional material is spelled out late in the derivation, i.e. at PF.

Having shown that the silent grammatical noun *PERSOON* has a non-silent counterpart (i.e. *persoon*), let us next address the question as to what licenses the distribution of such silent grammatical nouns. According to Kayne (2003), the occurrence of a silent noun is subject to a licensing requirement that there be some sort of antecedent which makes it possible to recover the (semantic) contents of the silent noun. In other words, an informal notion of recoverability of information is involved. This antecedent is not ‘strong’ in the sense that there is a lexical item present that ‘antecedes’ the silent item. Rather, a formal feature (i.e. a cognitive syntactic feature in Emonds’s sense) functions as an antecedent (i.e. identifies the semantic contents) of the silent noun. In (50), for example, the feature [+number], which arguably is part of the lexical make-up of the quantifying adjective *few*, functions as a local antecedent for silent *NUMBER* (see Kayne 2003). Thus, the grammatical features of the silent noun are somehow recoverable from its ‘immediate’ syntactic context.

(50) John ate [a few_[+number] NUMBER sandwiches]

Recall from our earlier discussion that it is the possessive pronoun, which indirectly assigns semantic content to the (non-silent) grammatical noun *persoon*.

(51) *Informatie over [mijn persoon]*
 information about [my person]
 “information about me”

(52) *Informatie over [mij]*
 information about [me]
 “information about me”

(53) **Informatie over [persoon]*
 information about [person]

Examples (51) and (52) have essentially the same meaning, which indicates that the semantics are fully contributed by the possessive pronoun. This claim is strengthened by the ungrammaticality of (53): in the absence of a possessive pronoun, the grammatical noun cannot be interpreted. The same picture arises for silent *PERSOON*:

(54) [*Wij vier PERSOON-en*] gingen naar huis.

- [we four person-en] went to home
 “The four of us went home.”
- (55) [*Wij*] *gingen naar huis.*
 [we] went to home
 “We went home.”
- (56) **[vier PERSOON-en]* *gingen naar huis.*
 [four person-en] went to home

The grammatical noun in (54) can only be interpreted in the presence of a personal pronoun with the features [+person, +plural]. If this pronoun is omitted, the noun cannot be silent, nor can it function as grammatical noun (cf. (56)).^{20 21}

The idea that the silent (grammatical) noun is licensed (i.e. identified) by the presence of a local grammatical feature associated with a functional category is reminiscent of Lobeck’s (1991, 1995) approach towards NP-ellipsis. She argues that ‘elision’ of the N(P) is dependent on the presence of a certain grammatical feature on a noun phrase-internal functional head that ‘properly’ governs the elided noun phrase, which in Lobeck’s analysis is a base-generated *pro* (see also Kester 1996). For example, a functional head D, which is specified for the feature [+Possessor] or the feature [+plural], is able to license a *pro* in its complement position:

- (57) a. This is Peter’s car and that is [_{DP} John [_D ’s [_{+Poss}] [_{NP} *pro*]]]
 b. These books are interesting but [_{DP} [_D those [_{+Plural}] [_{NP} *pro*]]] are not

²⁰ Notice that presence of a definite article *de* ‘the’ does not help:

- (i) **[De vier PERSOON-en]* *gingen naar huis.*

²¹ The ‘anteceding’ feature that licenses the silent noun must be local. ‘Local’ means within the extended nominal projection of the silent noun. As shown in (i), presence of a DP-external antecedent (i.e., *wij* in the main clause) is not sufficient for licensing the form *vieren* (i.e. *vier PERSOON-en*). A local, i.e. DP-internal, *wij* must be present.

- (i) *Wij* vermoeden dat [**(wij)* *vieren*] morgen ontslagen worden
 We suspect that we four-en tomorrow fired be
 “We suspect that we will be fired tomorrow.”

In the spirit of Lobeck (*ibidem*), Corver and Delfitto (1999) argue that the (interpretable) feature “human” is another grammatical feature involved in the licensing of *pro*. Following Postal’s (1969) insight that pronouns are determiners and adopting a transitive analysis of determiners (i.e. D takes a *pro*-complement), they argue that strong pronouns (i.e. Ds) carry the feature “human” and that it is this feature which licenses the *pro*-complement of D.²² Schematically:

- (58) a. [DP [D *wij*]_[person:1, number: pl, case: NOM, human: +] [NP *pro*]] (*wij*, ‘us’)
 b. [DP [D *ons*]_[person:1, number: pl, case: ACC, human: +] [NP *pro*]] (*ons*, ‘us’)

If [+human] is the relevant feature for the licensing of the *pro*-complement in (58), then it does not seem implausible that the same feature is involved in the licensing of the silent noun *PERSOON* in the representations in (59a,b):

- (59) a. [DP *wij*]_[human: +] [twee *PERSOON*-en]] (= *wij tweeën*; cf. (3a))
 b. [DP *ons*]_[human: +] [twee *PERSOON*-en]] (= *ons tweeën*; cf. (3b))

Obviously, the semantic content of the silent noun *PERSOON* is recoverable from the interpretable feature [+human].

Notice at this point that the pattern ‘PRON NUM-en’ always implies reference to human beings. The third person plural pronoun *zij* in (60), for example, cannot refer to a non-human entity.²³

- (60) *Zij tweeën worden morgen opgehaald*

²² Corver and Delfitto argue that only strong personal pronouns bear the feature [+human]. Weak personal pronouns and clitics are underspecified with respect to this feature. They propose that weak personal pronouns and clitics have to move to a verb which can provide them with a value, so that the clitic can license *pro*.

²³ In the case of reference to a non-human entity like ‘bike’, one must use the pattern ‘DEM NUM’:

- (i) *Die twee(*ën) worden morgen opgehaald*
 Those two(-en) are tomorrow up-picked
 “Those two (= bikes/persons) will be picked up tomorrow.”

As indicated by the translation, the expression *die twee* can have both a human and non-human reading. Importantly, the plural morpheme *-en* is not permitted. This may be due to the fact that the demonstrative pronoun *die* is unspecified for the feature ‘human’.

They two-en are tomorrow picked-up
 ‘The two of them (i.e., persons) will be picked up tomorrow.’
 ‘*The two bikes will be picked up tomorrow.’

If *wij/ons* in (58) and *wij/ons tweeën* in (59) involve the same licensing element, viz., the functional category $D_{[human:+]}$, then the question arises as to whether a real distinction is needed between an empty category *pro* (cf. (58)) and a silent noun PERSON (cf. (59))? One might, for example, try to reduce the silent nouns to the empty category *pro*. Alternatively, one might propose that what is labeled *pro* in (58) is actually a silent grammatical noun PERSON. The latter approach could be prompted by the fact that the ‘canonical’ example of *pro*, namely the element *pro* that we find in the subject position of finite clauses in so-called null-subject languages, is typically an (argumental) DP. That is, the empty pronominal is a D-element rather than a N-element; recall at this point the ‘Determiner’ status of personal pronouns. As will be clear from our previous discussion of the behavior of silent nouns, these phonologically empty elements display the grammatical behavior of a Noun, and not that of a Determiner. In short, there may be reasons to distinguish the empty *pro-determiner* category *pro* from a silent *noun* (see also Panagiotidis (2003) for arguments that silent nouns – in his terminology: null nouns – should be distinguished from *pro*).

4. Syntactic analysis

In this section we deal with the syntactic analysis of the two constructions at issue, i.e. *wij tweeën* and *met z’n tweeën*. We will start our investigation with the former construction.

4.1. *wij tweeën*

Consider again example (3a), which is repeated here as (61):

(61) ***Wij tweeën*** geven vandaag een lezing.
 We two-en give today a talk

“The two of us give a talk today.”

In the line of our previous discussion, we propose that there is a silent noun PERSON present in its syntactic representation. The plural morpheme *-en* is attached to this silent noun:

- (62) *wij twee PERSON-en*
we two PERSON-en
“the two of us”

This analysis of *wij tweeën* puts this construction on a par with a noun phrase like (63), in which we also find a combination of a (plural) personal pronoun and a lexical noun marked with plural morphology.²⁴

- (63) *wij taalkundigen*
we linguist-en
“we linguists”

Just like the nominal pattern *wij taalkundigen*, the pattern *wij NUM+-en* can fulfill a variety of grammatical functions. It can function, for example, as a subject (61), a direct object (64a), an indirect object (64b), and a complement of P (64c). The pronoun carries nominative case when the noun phrase acts as a subject, and accusative/oblique case (i.e. non-subject case) in the other grammatical functions.

- (64) a. Hij heeft ***ons tweeën*** uitgenodigd
He has us two-en invited
“He invited the two of us.”
b. Hij heeft ***ons tweeën*** een sleutel overhandigd
He has us two-en a key handed

²⁴ The constructions in (62) and (63) also share the property that the personal pronoun must be strong. Presence of a weak pronoun *we* (‘we’) yields an ungrammatical pattern:

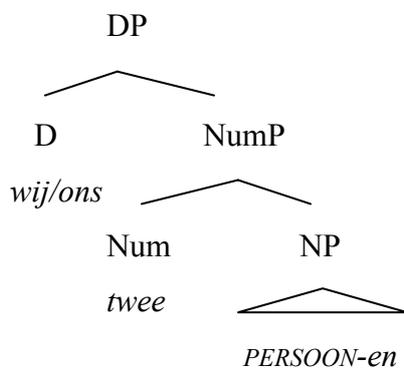
- (i) **we taalkundigen*
*we*_[weak] linguists (ii) **we tweeën*
*we*_[weak] two-en, ‘the two of us’

“He gave the two of us a key.”

- c. Ze hebben op *ons tweeën* gerekend
They have on us two-en counted
“They counted on the two of us.”

In the spirit of Abney’s (1987) analysis of the English nominal construction *we/us linguists*, we assign the following structural representation to the collective numeral construction *wij/ons tweeën*.^{25, 26}

(65) *Wij/ons tweeën*



As pointed out in section 3.2.4., we assume that the [+human]-feature associated with the strong pronoun in D licenses and identifies the content of the silent noun *PERSOON*.

4.2. *met z'n tweeën*

In this section, we consider the syntax of the construction *met z'n tweeën* in (66).

- (66) *We schrijven met z'n tweeën een artikel.*
We write with his two-en an article
“The two of us are writing an article.”

²⁵ See Déchaine and Wiltschko (2002) for a similar analysis. They assume that 1st and 2nd person pronouns can function as determiners; 3rd person pronouns cannot. They further assume that the DP contains an extra functional layer ΦP , where ϕ -features are encoded: [_{DP} [_D we [_{ΦP} Φ [_{NP} linguists]]]].

²⁶ We abstract away here from the question as to whether numerals occupy the head position or the Spec-position of NumP.

As shown in (67), this comitative PP-construction is also possible with the strong pronoun *ons*.²⁷

- (67) *We schrijven met ons tweeën een artikel.*
 We write with PRO.1.pl two-en an article
 “The two of us are writing an article.”

It goes without saying that the comitative patterns *met z'n tweeën* en *met ons tweeën* are very similar at the surface. They only differ from each other as regards the form of the pronoun. In (66) we have a weak possessive pronoun *z'n* ‘his’; in (67) we have the pro-form *ons*. In view of the possessive pronominal status of *z'n*, one might be tempted to draw the conclusion that *ons* is also a possessive pronoun. As a matter of fact, *ons* does occur as a possessive pronoun, as in *ons huis* ‘our house’. However, there is a reason for not interpreting *ons* in (67) as a possessive pronoun, namely: possessive pronouns in plural noun phrases are always inflected with schwa in Dutch, whether lexically headed (e.g. *onze kinderen*, our-e children, ‘our children’) or empty-headed (e.g. *de onze*, the our-e, ‘ours’). Thus, the absence of schwa in *ons vieren* (cf. **onze vieren*, in the intended sense) suggests, on morphological grounds, that *ons* is not a possessive pronoun, but rather a personal pronoun.²⁸ This latter interpretation

²⁷ As exemplified in (i), the pattern *met z'n/ons tweeën* also occurs as part of the noun phrase.

- (i) [*Wij met z'n/ons tweeën*] schrijven een artikel.
 We with his/us two-en write an article
 “The two of us are writing an article.”

That the PP forms a constituent together with *wij* is shown by the fact that it is followed by the finite verb of the main clause. This finite verb typically occurs in second position, i.e., C⁰ (the so-called Verb Second phenomenon). The question might be raised as to whether the split patterns in (66)-(67) are derivationally related to the pattern in (i). The fact that a sentence like (iia) is grammatical but a sentence like (iib) is not, suggests that the PP in (66)-(67) is a base-generated adjunct-PP within the clause.

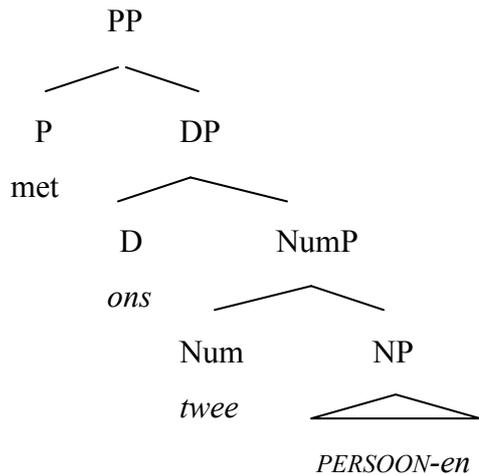
- (ii) a. [*Wij tweeën*] schrijven [*met z'n/ons tweeën*] een artikel.
 We two-en write with his/us two-en an article
 ‘The two of us write an article together.’
 b. **[Wij tweeën met z'n/ons tweeën] schrijven een artikel.*

²⁸ De Vooys (1967:340-341) suggests that, from a diachronic perspective, the pattern *met ons tweeën* finds its ‘origin’ in clausal copular constructions like (i), which were attested in Middle Dutch. In this example, the numeral *twee* functions as a predicate nominal and the PP *met ons* is an adverbial PP within the clause. The pronoun *ons* in (i) is a personal pronoun.

- (i) Wij waren [met ons] [twee]
 We were with us two

leads to the conclusion that *ons tweeën* in (67) has the representation in (68). As the reader will remember, this is the representation that we proposed for *wij/ons tweeën* (we/us two-en, ‘the two of us’) in section 4.1.

(68) *met ons tweeën*



Let us now turn to the construction *met z'n vieren*, which contains a weak possessive pronominal form *z'n* ('his'). Den Hertog (1973:142) argues that the formal similarity of certain personal pronominal forms and certain possessive pronominal forms in Dutch resulted into a variant of the *met ons vieren*-construction in which the pronoun was a possessive pronoun, the clearest case being *met z'n vieren*.²⁹ A remarkable

“With us (i.e., us included), we were two.”

Also in Den Hertog (1973:141), it is argued that *ons* in *met ons tweeën* historically is a personal pronoun, rather than a possessive pronoun. He points out in Middle Dutch forms such as *hen drieën* (them_{ACC} three-en, ‘the three of them’) were attested. The pronoun *hen* is the accusative form of the third person plural personal pronoun.

²⁹ An illustration of this formal similarity is given in (i). In (ia), we have a personal pronoun, in (ib) a possessive pronoun, and in (ic) the ‘met ons/z’n tweeën’-pattern:

- (i)
- a. Ik heb jullie gezien
I have you_{pl} seen
‘I saw you’
 - b. Ik heb [jullie huis] gezien
I have your_{pl} house seen
‘I saw your house’
 - c. Ik heb [jullie tweeën] gezien
I have you(r)_{pl} two-en seen
‘I saw the two of you.’

characteristic of this pattern is, of course, the fact that *z'n* is a third person singular possessive pronoun. The question, obviously, arises as to how *z'n* can enter into an anaphoric dependency with a plural antecedent, as in (66), where *we* 'we' functions as the antecedent.³⁰

We will tentatively propose that *z'n* in the expression *met z'n tweeën* is a weak possessive pronoun that is unspecified for the φ -features person, number and gender. It only expresses the grammatical feature 'possessive'. Some support for the claim that *z'n* can be unspecified for φ -features comes from its behavior in possessive doubling constructions in certain dialects of Dutch. In those constructions, the possessive noun phrase has the following pattern: $DP_{possessor} + z'n + N_{possessee}$, as in standard Dutch *Jan z'n auto* (John his car, 'John's car'). In Standard Dutch, there must be φ -feature agreement between the possessor and the pronoun, whence the ill-formedness of a pattern like **Marie z'n cadeau* (Marie *z'n* present, 'Marie's present'), where the possessor is feminine. Interestingly, in certain dialects of Dutch the possessive pronoun *z'n* can be doubled by a possessor, which seems to differ from *z'n* in person, number or gender. Consider, for example, the following examples from Hooghalen Dutch (data from the DiDDD-project; Corver et al. (2007)):

Given this formal similarity between the personal pronominal form and the possessive pronominal form, it is imaginable that certain speakers assign the structure of a possessive noun phrase to these constructions (see (74) below). One could even imagine that the two analyses (i.e. the one in (68) and the one in (74)) are co-existent in the grammar of a speaker. Some support for this seems to come from the data in (ii) from Scherpenisse Dutch, where we find either the form *wij* or the form *ons* in subject position:

- (i) [Wie vieren] / [Ons vieren] bin naar de stad geweest (Scherpenisse Dutch)
 We_{NOM} four-en /us/our four-en are to the city been
 'The four of us went downtown.'

³⁰ This remarkable behavior of *z'n* is also attested in another 'special' construction of Dutch:

- (i) a. We zingen nu [op z'n hoogst] / [op ons hoogst]
 We sing now at his/its highest / at our highest
 "Now we sing at the highest."
 b. De herfstkleuren zijn nu [op z'n mooist] / [op hun mooist]
 The autumn-colors are now at his/its beautiful-est / at their beautiful-est
 "The autumn colors are now the most beautiful."

These superlative constructions seem to have a manner interpretation. *Op z'n/hun hoogst* in (ia), for example, can informally be paraphrased as 'at the highest way/manner'. From this reading one might want to draw the conclusion that a silent grammatical noun 'WAY' is present in these constructions. See Corver and Matushansky (2006).

- (69) a. Hef hij [Marie zien kado] al kregen? (Hooghalen Dutch)
 Has he Mary_[feminine] ‘his’ present already received
 “Has he already received Marie’s present.”
- b. Hef hij [oes zien kado] al kregen?
 Has he us_[+plural, 1person] ‘his’ present already received
 “Has he already received our present?”
- c. Hef hij [jullie zien kado] al kregen?
 Has he you_[+plural, 1 person] ‘his’ present already received
 ‘Has he already received your present?’

Suppose now that *z’n* in the *met z’n tweeën*-construction is also unspecified for phi-features, and that, as a result of this absence of phi-feature specification, it can enter into an anaphoric dependency relation with a first person plural antecedent like *wij* in (70a). As an alternative representation one might propose the ‘hidden’ doubling construction in (70b), where a silent pronoun (*pro*) enters into an anaphoric dependency with the antecedent *wij*; in that case, *z’n* would function as a pure marker of possession (for a more precise characterization, see below). In what follows, we will adopt the analysis in (70b).

- (70) a. *Wij*_[+plural, 1person] komen [met *z’n tweeën*]
 We come with ‘his’ two
 ‘The two of us will come.’
- b. *Wij*_[+plural, 1person] komen [met [*pro z’n tweeën*]]

In the line of our previous discussion, we will assume that the silent noun *PERSON* in the *met z’n tweeën*-construction has to be licensed by a local antecedent, which is specified for the interpretable property [+human]. We will assume that *z’n* in (70a), or *pro* under the alternative analysis in (70b), gets associated with the [human]-feature via its antecedent.³¹ This way, *z’n* (or *pro*) can license the silent noun *PERSON*.³²

³¹ It seems more correct to take [+animate] rather than [+human] to be the relevant interpretive feature. As shown in (i), the *met z’n tweeën*-construction can have a non-human but animate antecedent. As shown in (ii) inanimate antecedents are excluded:

- (i) a. *De paarden* stonden met *z’n tweeën* achter het hek
 The horses stonde with his two-en behind the fence
 “The two horses stood behind the fence.”

Let us now try to give a more precise characterization of the internal syntax of the *met z'n tweeën*-construction. In the line of Den Dikken's (1998, 2006) Predicate Inversion analysis of DP-internal possessive relations, we will assume that a possessive noun phrase like *Jans vrienden* (Jan's friends) has the 'underlying' structure in (71) and the derived structure in (72); see also Corver (2003, 2008). In (71), the possessor (*Jan*) is contained in a prepositional predicate (i.e. PP), which is headed by a dative assigning null preposition (i.e. P_o) and which takes the possessum (*vrienden*) as its subject.³³ Thus, the 'underlying' possessive meaning roughly corresponds to: 'friends (are) to Jan'. (72) represents the structure which is derived by: (i) the application of X-to-F-movement (for reasons of domain extension (equidistance)),³⁴ (ii) incorporation of P into the F-complex (yielding the possessive 'have'-relation at the nominal level), (iii) predicate displacement of the "beheaded" dative PP across the possessum to Spec,FP.

-
- b. **De fietsen stonden met z'n tweeën achter het hek*
 The bikes stond with his two-en behind the fence
 "The two bikes were behind the fence."

³² As shown by (ia) and the intended representation (ib), this strategy in which *pro* enters into an anaphoric and agreement dependency with the subject-DP *wij* does not generalize to 'regular' possessive constructions:

- (i) a. *Wij houden van z'n ouders*
 We love of his parents
 *'We love our parents.' (intended reading)
 'We love his parents' (only possible reading)
- b. **Wij_i houden van [pro_i z'n ouders]*

Thus, the distribution of the *pro*-possessor should be significantly restricted. Its restriction to the *met z'n tweeën*-construction (though, see note 29) suggests that there is some sort of connection with the restrictions on *pro*-possessors and the presence of the silent noun *PERSOON*. What might be relevant here is the precise interpretation of the possessive noun phrase. In (ia), we have a clear possessive interpretation, with *parents* as the possessum and *pro/z'n* as the possessor. An important characteristic of the *met z'n tweeën*-construction is that it does not have a true possessive meaning; i.e. *twee PERSOON-en* does not act as the possessum and *z'n* does not act as a true possessor. The relationship might be more precisely characterized as an identificational/definitive one, with *pro* as the identifying/defining nominal element (via its antecedent *wij*) and *twee PERSOON-en* as the element that is identified/defined. In this respect, the construction would be comparable to an archaic English 'possessive' construction like *Dublin's fair city* (cf. Jespersen 1977:98), where *Dublin* is interpreted as the element that defines/identifies 'city', and not as a true possessor (See also: *the fair city of Dublin*). Possibly, this defining/identifying interpretation of the *met z'n tweeën*-construction implies that the pronoun *z'n* does not carry 'possessive' meaning. This might somehow be at the basis of the different behavior of *z'n* in (i) and *z'n* in the *met z'n tweeën*-construction.

³³ In certain languages, this 'underlying' possessum-possessor pattern surfaces, as in French *un livre à Jean* (a book to Jean; 'Jean's book'); see Kayne (1994) and Den Dikken (1998) for discussion.

³⁴ After head movement of the small clause head X to F, the inverted PP-predicate and the small clause subject are equally far away from the extraction site of the PP-predicate. Thus, the small clause subject does not count as 'closer' with respect to the extraction site. Consequently, locality of movement is not violated.

As indicated, the bound morpheme *'s*, characterized by Den Dikken (ibidem) as a nominal copula, is analyzed as the PF-spell out of the functional head F.

(71) *base structure of possessive constructions*

[_{DP} Spec [_{D'} D [_{FP} Spec [_{F'} F [_{XP} vrienden [_{X'} X [_{PP} P Jan]]]]]]]]]

(72) *derivation of possessive construction*

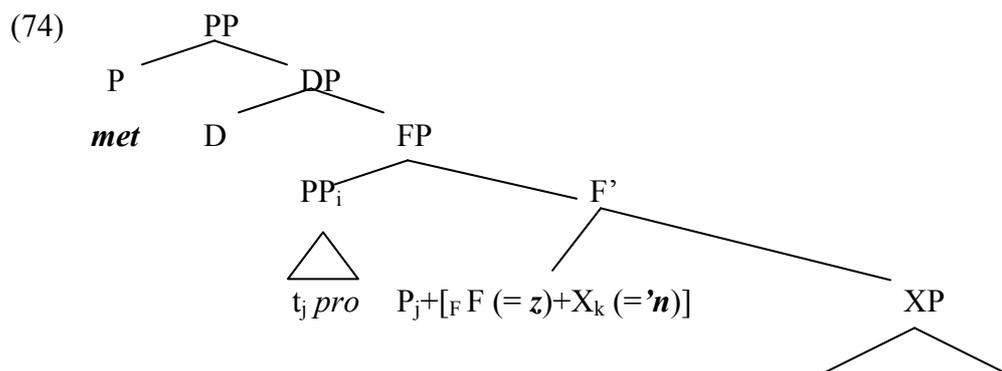
[_{DP} Spec [_{D'} D [_{FP} [_{PP} t_k Jan]_i [_{F'} F (= 's)+X_j+P_k [_{XP} vrienden [_{X'} t_j t_i]]]]]]]]

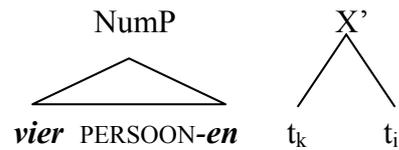
Elaborating on our proposal that *met z'n vieren* contains a silent noun *PERSOON*, as in (73a), and adopting the predicate inversion analysis of possessive noun phrases, we argue that the underlying syntactic representation is that in (73b); i.e., a small clause configuration with the NUMP *vier PERSOON-en* as its subject and the dative PP as its predicative phrase.

(73) a. *met z'n vier PERSOON-en*
 with 'his' four PERSON-en
 "the four of us/you/them"

b. [_{XP} [_{NUMP} vier PERSOON-en] [_{X'} X [_{PP} P_{aan} pro]]]
 'four persons (is) to pro (= us/you/them)'

The sequence *z'n vieren* is derived by applying the following movement steps: (i) movement of the small clause head to X, for reasons of domain extension (equidistance), (ii) incorporation of the dative preposition into the F+X-complex, and (iii) predicate inversion of the "beheaded" dative PP across the possessum *vier PERSOON-en* to Spec,FP.





As depicted in the tree, we will assume that the weak pronominal *z'n* is the spell out of the complex head [F+X], which results from incorporation of the small clause head X into F. More specifically, following Corver (2008) and Corver & Van Koppen (2007b), we will assume that the weak possessive pronoun *z'n* consists of two parts, viz. *z* and *'n*. This latter element is taken to be an instance of the so-called spurious indefinite article. In Bennis et al. (1998), it is observed that this spurious indefinite article typically shows up in contexts of DP-internal predicate movement.³⁵ They argue that this linking article starts out as a small clause head and undergoes head movement in contexts of predicate displacement. We will assume that *z* in *z'n* constitutes the nominal copula in the sense of Bennis et al. (1998) and Den Dikken (2006).³⁶ This nominal copula is the phonological spell out of F. Thus [F+X] surfaces phonetically as *z'n* (i.e. /zən/). In the line of our previous discussion, we will take this bound morphemic nominal copula to be unspecified for φ -features. We further assume that there is an empty pronominal possessor (*pro*) present, which enters into a coreference and agreement relationship with the subject of the sentence (e.g. *wij* in (70)). We propose that it is this possessor *pro*, carrying the feature 'human', which functions as licenser for the silent noun PERSOON.

³⁵ Some constructions in which this spurious indefinite article pops up are the following:

- (i) a. wat voor 'n boeken
What for a books; "what kind of books?"
- b. *die etters van 'n jongens
those jerks of a boys; "those jerks of boys"
- c. wat 'n boeken!
What a books; "such a large amount of books!"

³⁶ The nominal copula can surface phonologically in different forms, e.g. as a free morpheme *van*, as in the N van N-construction *een etter van een jongen* (a jerk of a boy), or as a bound morpheme *-s*, as in the possessive construction *Jan-s boek* (Jan-s book). See Den Dikken (2006) and Bennis et al. (1998) for discussion of the properties of the nominal copula.

5. A micro-comparative perspective

So far we have given an analysis of the internal syntax of the constructions *wij/ons tweeën* and *met ons/z'n tweeën*. In this section, we will try to further our insight into the syntax of these constructions by taking a micro-comparative perspective on them. The data that will be presented are collected as part of the DIDDD-project (Diversity in Dutch DP Design), which is executed at the University of Utrecht (see Corver et al. 2007).

5.1. Micro-linguistic evidence for *-en* as a plural suffix

A first question that we would like to address from a micro-comparative view perspective concerns the nature of the suffix *-en* that immediately follows the numeral. An analysis of *-en* that we have not considered thus far but which is certainly imaginable is one according to which *-en* is not a plural inflectional suffix but rather a phonologically weak pro-form occupying the N-position; that is, an item more or less equivalent to English *one(s)*, as in *the four big ones*. Schematically, for *wij tweeën*:

(75) [DP wij [NumP twee [NP en]]]

In Kranendonk (2008), it is proposed that in certain dialects of Dutch a weak pro-form occurs after a numeral in (apparent) patterns of NP-ellipsis (i.e. patterns in which the numeral is not followed by an overt noun). Consider, for example, the following pair from Giethoorn Dutch:³⁷

- (76) a. Ik heb vier(*-e) appels (Giethoorn Dutch)
I have four apples
- b. Hie he vuuf appels en ik heb er vier*(-e)
He has five apples and I have there four-*e*
“He has five apples and I have four.”

³⁷ Other dialects that exhibit this phenomenon are found in Urk, Beekbergen, Klazienaveen, Groenlo, Zierikzee, Onstwedde, Ookstkapelle, Oosteklo.

In (76a), the ‘attributive’ numeral *vier* precedes the overt noun *appels* and cannot be followed by *-e* (i.e. schwa); in (76b) it must be followed by *-e*. Kranendonk argues that the *-e* in (76b) is actually a pro-form occupying the N-position.³⁸ When we now consider the Giethoorn Dutch variants of the two constructions that are central in this article, we observe that the numerals are formally (i.e. phonologically) distinct. That is, the bound morpheme following *vier* is pronounced as ‘schwa + n’.³⁹

- (77) a. *wij vier ’n*
 we four-en
 “the four of us”
- b. *met z’n vier ’n*
 with his four-en
 “with four”

We conclude from the formal difference between the pattern in (76b) on the one hand, and the pattern in (77) on the other hand, that the Giethoorn Dutch patterns in (77) feature a plural suffix and not a weak pronoun. In other words, the structure is: [*wij [twee [PERSOON-en]]*].

Interestingly, there are dialects in which both forms are attested in the two constructions at issue. Consider, for example, the following examples from Onstwedde Dutch:

- (78) a. *wie faern* b. *wie faere* (Onstwedde Dutch)
 we four-n *we four-e*
 “the four of us” “the four of us”

³⁸ See Corver and Van Koppen (2008) for an analysis of (apparent) NP-ellipsis phenomena with an adjectival remnant in terms of the presence of a weak (bound morphemic) pro-form in N.

³⁹ Importantly, as opposed to Standard Dutch, in which the final nasal sound ‘n’ of the plural suffix is typically unpronounced, the nasal ‘n’ is clearly pronounced in Giethoorn Dutch. Thus, while in Standard Dutch the noun *paarden* (horses) is typically pronounced as ‘paarde’ (i.e. with a schwa at the end), in Giethoorn Dutch it is pronounced as ‘paarden’ (i.e. with schwa+n at the end).

We propose that (78a) features the plural inflectional morpheme *-en*, whereas (78b) features the weak pro-form *-e*, which occupies N. The two representations corresponding to (78a-b) are given in (79a-b):

- (79) a. [DP wie [NumP faer [NP PERSOON-n]]] (-n = plural suffix)
 b. [DP wie [NumP faer [NP e]]] (-e = pro-form N)

5.2 Microvariation within the patterns *wij vieren* and *met z'n/ons vieren*

Besides the pattern *wij vieren* in (80a), we find the patterns (80b) and (80c):⁴⁰

- (80) a. *wij vieren (zijn naar de stad geweest)* (Standard Dutch)⁴¹
 we four-en (are to city been)
 ‘The four of us went downtown.’
- b. *wij vier* (Dilbeek Dutch)
 we four
 ‘the four of us’
- c. *weulle gevieren* (Lier Dutch)
 we ge-four-en
 ‘the four of us’

(80b) differs minimally from (80a), which we assigned the structural representation in (81a). We will assume that in those examples, the inflectional morphology is simply ‘part of’ the silent noun, as in (81b).⁴²

- (81) a. [DP wij [NumP vier [NP PERSOON-en]]]
 b. [DP wij [NumP vier [NP PERSONEN]]]

⁴⁰ On the website of the Nederlandse Taalunie, it is stated that the pattern *wij vier* belongs to the standard Dutch language spoken in Belgium (cf. <http://taaladvies.net/taal/advies/vraag/538/>).

⁴¹ The patterns in (80a) and (81a) are also attested in many dialectal variants of Dutch.

⁴² Recall at this point the examples (16)-(17) from Italian, where the silent noun was the plural noun *ORE*.

In (80c), we find the prefix *ge-* before the numeral *vier*. We will assume that this prefix is the same *ge-* that is also found on the words in (82), which all have a collective meaning, just like the numeral constructions we discuss in this paper.⁴³

- (82) a. de twee vriendelijke gebroeders Grimm
 the two kind brothers Grimm
 b. de drie vriendelijke gezusters Brontë
 the three kind sisters Brontë

We will assume that the prefix *ge-* in (82) combines with the noun and adds a collective meaning to the complex word. Interestingly, the noun must be plural in those cases, i.e.: **de gebroeder Grimm*, **de gezuster Brontë*. The reason is that a noun denoting a single individual cannot get a collective reading. Thus, we expect the non-existence of the pattern **wij gevier* (or **weulle gevier* in Dilbeek Dutch), in which the plural morpheme *-en* is not realized (Compare, for example, with the existing pattern *wij vier* in (80b), where the plural morpheme is not present). This prediction is borne out. The collective prefix requires the overt manifestation of plural morphology.⁴⁴

We tentatively propose that the pattern *weulle gevieren* in (80c) has the following representation:⁴⁵

⁴³ See Schönfeld (1964:136), who states that the prefix *ge-* (gothic *ga-*) has the meaning ‘together’.

⁴⁴ An example in which we arguably find the collective prefix *ge-* as part of a singular noun is given in (ia). In traditional grammars, a noun like *gebergte* is characterized as a ‘collective noun’. The singular noun *gebergte* designates a mountain range (i.e. a collection). It has the morphological make-up: *ge-* + *berg* + *-te* (*ge-* + mountain + *-te*). In De Haas and Trommelen (1993:256), *ge- ...-te* is characterized as a nominalizing discontinuous affix. Other nouns that belong to this class are: *geboomte* (‘trees, timber’), *gesteente* (‘stones’), *gevogelte* (‘birds, poultry’), *geboefte* (‘riff-raff, rabble’), *gebeente* (‘bones’). As shown in (ib), a collective noun like *gebergte* can be pluralized, in which case it has the interpretation ‘more than one mountain ranges’:

- (i) a. dat mooie gebergte
 that beautiful chain-of-mountains
 b. die mooie gebergtes
 those beautiful chains-of-mountains

⁴⁵ In Belgium Dutch dialects, we also find the pattern *wij geviertjes* (we *ge-*four-DIM-s, ‘the four of us’). On the surface, the collective numeral *vier* is followed by the diminutive morpheme *tje*, which in turn is followed by the plural suffix *-s*. According to our analysis, it is the silent noun *PERSOON*, which functions as a host for the derivational suffix *-tje* and the inflectional suffix *-s*.

(83) [DP wij [NumP gevier [NP PERSOON-en]]]

In this structure, *ge-* is prefixed to the numeral and expresses its collectivity (i.e. ‘there is a unit/collection consisting of 4 members’). This collective numeral combines with a silent noun *PERSOON*, which is the bearer of plural morphology.

Let us next turn to the variants of the pattern *met ons vieren*:

- (84) a. Wij zijn [met ons vieren] naar de stad geweest.
We are with us four to the city been
“The four of us went downtown.”
- b. ... [me os geviere]... (Mol Dutch)
- c. ... [me vieren] ... (Dilbeek Dutch)
- d. ... [me vier] ... (Dilbeek Dutch)

The surface pattern (84b) displays the collective suffix *ge-* on the numeral. We propose that this pattern has the structure in (85), quite analogously to the structure in (83).

(85) [PP me [DP ons [NumP gevier [NP PERSOON-en]]]]

Consider next (84c,d). The most remarkable property of these surface patterns is the absence of the personal pronoun *ons*. We propose that in those cases the pronominal D can remain unpronounced due to the fact that its contents (i.e. first person plural) is contextually provided by the subject-pronoun *wij* ‘we’. The difference between *viere* (84c) and *vier* (84d) relates to whether or not inflectional morphology is part of the silent noun; compare (86a) with (86b):

- (86) a. [PP me [DP D [NumP vier [NP PERSOON-en]]]]
b. [PP me [DP D [NumP vier [NP PERSONEN]]]]

Besides the pattern in (84a-d), we also find the following patterns across dialects of Dutch:

- (87) a. Wij zijn [ons vieren] naar de stad geweest (Oosteklo Dutch)
 We are us four to the city been
 “The four of us went downtown.”
- b. ... [ons geviere]... (Lier Dutch)
- c. ... [geviere] ... (Standard Dutch)

These examples differ from those in (84) as regards the presence of the comitative preposition *met* ‘with’. In (87), there is no preposition present. One might, of course, propose that there is a silent preposition *MET* present in those constructions, as in (88):⁴⁶

- (88) a. [PP MET [DP ons [NumP vier [NP PERSOON-en]]]]
- b. [PP MET [DP ons [NumP gevier [NP PERSOON-en]]]]
- c. [PP MET [DP D [NumP gevier [NP PERSOON-en]]]]

An alternative approach to the patterns in (87) would be to say that they are simply DPs. Under the latter analysis, one might draw a parallel with ‘quantifier floating’ constructions like (89):

- (89) *Wij hebben allen een artikel geschreven* (Standard Dutch)
 We have all-en an article written
 ‘We have all written an article.’

At the moment, we have no convincing evidence for choosing for one or the other option.

We close off this section on the micro-diversity of the collective numeral constructions with the examples in (90):

- (90) a. Wij zijn [met z’n vieren] naar de stad geweest
 We are with his four-en to the city been
 ‘The four of us went downtown.’

⁴⁶ See also Kayne (2003) for silent prepositions.

b. ... [met 'n vieren]... (Hooghalen Dutch)

In section 4.2 we argued that the derivation of the pattern (90a) involves the phenomenon of predicate inversion (see (74)). The weak possessive pronoun *z 'n* was interpreted as a composite element consisting of the nominal copula *z* (=F) and the so-called spurious indefinite article *'n* (=X). We propose that the Hooghalen Dutch pattern in (90b) only differs from the pattern in (90a) as regards the spell out of F at the sound surface. More specifically, in the Hooghalen Dutch example (90b), F does not surface as a nominal copula *z*. Also in this case, microvariation boils down to the externalization of a uniform syntactic representation. The syntactic representation is given in (91).

(91) [PP met [FP [PP t_j + pro]_i [F' [P_j+ [F+X_k(='n)]] [XP [vier PERSON-en] [X' t_k t_i]]]]]

Summarizing, in this section we have discussed several variants from Dutch dialects of the pivotal constructions of this paper. We have shown that most of the variation can be explained in terms of externalization. The syntactic structures are exactly the same in all variants; what constitutes the differences at the surface is the phonological realization of syntactic heads.

Section 6. Conclusion

In this article we investigated some syntactic expressions that display a remarkable occurrence of a plural morpheme. Instead of taking an approach according to which these expressions are fixed units, which are stored as 'constructions' in the lexicon, we tried to show that these superficially remarkable expressions result from an intriguing interplay between the regular computational system of human language (say Merge and Move), the lexicon and the phonological spell-out of syntactic structure.

An important ingredient of our analysis of the various constructions was the existence of silent grammatical nouns in the sense of Kayne (2002, 2003, 2007) and Emonds (1985, 2000). We have argued that the constructions under discussion contain a silent PERSON/PERSON. This silent noun is licensed by an antecedent in its extended

projection with the feature [+human]. It serves as the host for the plural morpheme –*en*, which is spelled out in Northern Standard Dutch (contrary to the noun itself).

Dialects of Dutch display several variants of these constructions. We have argued that the variation is not to be sought in the syntactic structure, but that the syntactic make-up of these constructs is similar. Rather, it is the phonological realization of the syntactic heads, which causes differences at the surface.

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