Dutch *'s*-prolepsis as a copying phenomenon

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This chapter investigates Dutch expressions involving two instances of the bound morpheme –*s*, which is traditionally analyzed as a genitival case suffix, as in *blootshoofds* (lit.: bare-s-head-s; 'bare headed; with the head bare') or *'s Zondags* (lit.: -s Sunday-s; 'on Sundays'). The first instance of –*s* in these expressions is traditionally qualified as being proleptic in that it anticipates the occurrence of the final –*s* that is right-attached to the noun. An analysis of –*s*-prolepsis is proposed in terms of the operations movement/copying. More specifically, it is argued that in expressions like *bloothoofds*, for instance, -*s* is not a genitival case suffix but rather a small clause head that establishes a predication relationship between a predicate and a subject (schematically: [$_{XP}$ hoofd [$_{X'}$ –*s* [$_{AP}$ bloot]]]). The surface order is derived by movement of the predicate to a position preceding the subject and concomitant head movement of the small clause head –*s* to the functional head into whose specifier position the displaced predicate has moved (schematically: [$_{FP}$ bloot$_j$ [$_{F'}$ –*s*$_i$+F [$_{XP}$ hoofd [$_{X'}$ –*s*$_i$ ~~bloot~~$_j$]]]]). The multiple realization of the two –*s* copies is accounted for in terms of Nunes's (1995, 2004) theory about the linearization of movement chains. Cases like *'s Zondags* receive the same basic account, with the difference that –*s* is analyzed as a (weak) demonstrative pronoun (i.e. a reduced variant of the word *des*) rather than a small clause head. A parallel is then drawn with phenomena of demonstrative-doubling in prepositional structures in German dialects.

1. Prolepsis as a design property of human language

The notion *prolepsis* is used in (Dutch) traditional grammar to refer to the phenomenon of grammatical anticipation: an element appears 'too early' in the linguistic representation, i.e. in a position which is not its 'canonical' position or where it does not find its origin (Overdiep 1937: 137 ff.). A well-known case of *syntactic prolepsis* is the appearance in the main clause of a sentence element that belongs to (i.e. fulfills a grammatical function) in the embedded clause, as for example in (1) where the wh-word *who* surfaces as a member of the main clause but is interpreted as a member (i.e. a direct object) of the embedded clause:

(1) *Who* do you think that she kissed?

This instance of syntactic prolepsis, which in traditional grammar has been referred to as 'sentence intertwining' (Dutch: *zinsvermenging* (De Vooys 1967); German: *Satzverschlingung* (Paul 1904)), is also familiar from generative grammar. In that framework, syntactic prolepsis as in (1) is analyzed in terms of the displacement property of human language. The constituent *who* in (1) starts out as a direct object noun phrase of the verb *kissed*, from which it receives its semantic role (theme), and is subsequently moved to the left periphery of the main clause, i.e. Spec,CP, where it receives its interrogative interpretation. In pre-minimalist analyses, syntactic prolepsis as in (1) was analyzed in terms of two levels of representation: d-structure (the pre-movement structure where *who* gets its theta role) and s-structure (the structure resulting from overt movement). In current minimalist analysis, d-structure and s-structure — being non-interface levels — have been eliminated. The 'd-structure' (i.e. thematic) position is obtained through the syntactic operation External Merge, which combines the lexical items *kissed* and *who* in (1) into a new syntactic object (VP). The 's-structure' (i.e. proleptic) position is derived by the computational operation Internal Merge (i.e. Move). This operation takes *who* in (1) and moves it to the left edge of the syntactic object that has been built up to that point in the derivation (say the CP *do you think that she kissed*).

In Chomsky (1993), it is proposed that movement leaves behind a copy of the moved element, rather than a trace. For the derivation of a sentence like (1), this implies that under a successive-cylic movement analysis of long distance wh-movement, there are copies of the fronted wh-word in the object position of *kissed* and in the Spec-position of the embedded C. Schematically (abstracting away from other movement operations):

(2) [$_{CP}$ *Who* do you think [$_{CP}$ *who* that she kissed *who*]]

As is clear from (1), only the highest copy (i.e. the leftmost proleptic constituent) may survive (i.e. surface phonetically) at PF. The lower copies ('the traces') are not to be pronounced in standard English.

Intererestingly, there are languages/dialects in which long distance wh-movement features two instances of the fronted wh-element: one in the highest CP and the other in the intermediate CP. An example is given in (3) from German.

(3) *Wen* glaubst Hans [*wen* Jakob gesehen hat]?   (McDaniel 1986)
    Whom thinks Hans whom Jakob seen has
    'Who does Hans think that Jakob saw?'

The question obviously arises as to why 'wh-prolepsis' (i.e. the anticipatory occurrence of a wh-element; i.e. wh-movement) permits wh-duplication (i.e. phonetic realization of more than one copy) in (3) but not in (2).

Besides syntactic prolepsis, i.e. the anticipating occurrence of a constituent (e.g. a wh-phrase) in the syntactic representation, (Dutch) traditional grammar has also identified phenomena of *morphological prolepsis*, i.e. the anticipating appearance of an inflectional morpheme α on an element X, which is not a regular host of such an inflectional element and which is followed by an element Y which ís a regular host of α. An interesting case of morphological prolepsis in Dutch is the anticipatory occurrence of the (attributive) adjectival agreement morpheme –*e* on degree 'adverbs' that modify a gradable adjective that also carries the attributive inflectional morpheme –*e* (cf. Corver (2006)).[1] Some examples of this phenomenon of morphological prolepsis are given in (4). The relevant pattern is schematically represented in (5):

(4) a. een [erg(-*e*) leuk-e] auto
       a very-AGR nice-AGR car
       'a very nice car'
    b. [vreselijk(-*e*) leuk-e] huizen
       extreme-AGR nice-AGR houses
       'extremely nice houses'

(5)   [$_{FP}$ [$_{AP}$ [$_{XP}$ X$_{<φ>}$] A$_{<φ>}$] [$_{F'}$ F [$_{NP}$ N$_{<φ>}$]]]   (XP is the degree adverb)

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[1] Another phenomenon that Dutch traditional grammar characterizes as an instance of prolepsis is Complementizer Agreement, i.e. the phenomenon that the complementizer agrees with the subject pronoun, as does the finite verb. Some generative studies have analyzed this instance of prolepsis in terms of movement theory (cf. Zwart's 1993 T-to-C movement analysis), others have interpreted it in terms of Agree (cf. Van Craenenbroeck and Koppen 2002, Carstens 2003).

As shown in (4), the degree word (*erg*, *vreselijk*) can (optionally) carry the inflectional morpheme –*e* (i.e. the sound 'schwa') if it modifies a (gradable) attributive adjective carrying this inflectional morpheme. Importantly, the inflectional morpheme -*e* appears on all (prenominal) attributive adjectives except for those that modify an indefinite neuter singular noun phrase, as in *een leuk(*-e) huis* (a nice(*-AGR) house). As expected, proleptic –*e* does not occur on the degree adverb in such cases:

(6) a. een [erg(*-e) leuk] huis   (Compare with (4a))
        a very(*-e) nice house
    b. een [vreselijk(*-e) leuk] huis   (Compare with (4b))
        a extreme(*-e) nice house

As argued in Corver (2006), the phenomenon of proleptic agreement as illustrated in (4) is a systematic design property of natural language (in casu: Dutch) and should not be interpreted, for example, as sloppy speech (i.e. a performance property) or an imperfection of language. Its systematic and restricted behavior is shown among others by the following two properties: (a) the host of the proleptic –*e* must always be a degree adverb; other adverbs are excluded (see (7)); (b) within the class of degree adverbs, it is only a subclass that permits proleptic –*e*, viz. those that designate (extremely) high degree (see (8)).

(7) a. een [erg(-e) dur-e] fiets   (degree adverb)
        a very-AGR expensive-AGR bike
        'a very expensive bike'
    b. een [waarschijnlijk(*-e) dur-e] fiets   (modal adverb)
        a probable-AGR expensive-AGR bike
        'a probably expensive bike'
    c. een [gelukkig(*-e) goedkop-e] fiets   (evaluative adverb)
        a fortunate-AGR cheap-AGR bike
        'a fortunately cheap bike'

(8) a. een [compleet/*complet-e blind-e] man (absolute degree)
        a complete/*complete-AGR blind-AGR man
        'a completely blind man'
    b. een [vrij/*vrij-e dur-e] auto   (moderate degree)
        a fair/fair-AGR expensive-AGR car

Since a complete analysis of this phenomenon of morphological prolepsis is beyond the scope of this article, I will confine myself to a rough characterization of what seems to underlie this pattern of morphological prolepsis (see Corver (2006) for a more detailed discussion). As pointed out above, only a degree adverb that designates a very high degree can bear the proleptic inflectional morpheme –*e* that enters into an agreement relationship with the noun. These proleptically agreeing high degree adverbs typically have an affective/emphatic (i.e. focalized) force. Suppose now that this affective/emphatic force is associated with its placement in a left peripheral A-bar type position (i.e. an edge position) within the extended adjectival domain. More specifically, let's assume that the proleptically agreeing degree adverb occupies Spec,DegP. The intuitive idea would be now that being in an edge position, the proleptically agreeing degree adverb (the probe) is able to enter into an agreement relationship with the noun (the goal). This way, the uninterpretable φ-features associated with –*e* on the degree adverb (i.e.

the proleptic inflection) are deleted under matching with the interpretable φ-features of the noun. This possibility of having an agreement relationship between the edge of a phrase XP (in casu: Spec,DegP) and another element is in line with Chomsky's (2000) Phase-impenetrability condition, which informally states that the spec-position and the head position of some phrase XP are accessible for entering into a dependency relation with some element outside of XP. Thus, proleptic agreement within the Dutch attributive adjectival system is another illustration of the accessibility of the edge of a phase.[2]

From this brief discussion of syntactic and morphological prolepsis, we may conclude that this phenomenon of grammatical anticipation is part of the design of natural language. Obviously, the traditional notion of 'prolepsis' is nothing but a descriptive term for a grammatical phenomenon that shows up at the 'surface' of a linguistic expression: some element (a syntactic constituent, a morpheme) in a way shows up 'too early' in the linear string. It is the linguist's task to give an account of the anticipatory occurrence of some grammatical element in certain linguistic expressions, e.g. in terms of operations such as 'movement' (see 'wh-prolepsis' in (1)) and 'Agree' (see –*e*-prolepsis in (4)).

In this article, I will investigate another pattern of prolepsis that has been observed in (Dutch) traditional grammar, viz. the appearance of an anticipatory –*s* in structural contexts like those in (9):

(9) a. bloot**s**hoofd**s**
   bare-s-head-s
   'bare headed; with the head bare'
 b. binnen**s**mond**s**
   inside-s-mouth-s

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[2] This brief sketch of the phenomenon of prolepsis of adjectival agreement in degree adverb-adjective patterns raises the following questions: (i) Why is the phenomenon optional?; (ii) How is the double agreement on both the degree adverb and the adjective explained — after all, only one of these can be at the edge of the DegP? A possible answer to the first question is that the phenomenon is not truly optional. One might argue, for example, that degree adverbs displaying proleptic –*e* occupy a different structural position than 'bare' degree adverbs. More specifically, the former occupy a truly left-peripheral position (say, Spec,DegP), whereas the latter occupy a left-branch position lower in the functional skeleton of the adjective phrase (say, Spec,FP); see Corver 2000, 2006, who argues that DegP-internal degree adverbs originate as predicates in a post-adjectival position and undergo movement to a left branch Spec-position within the extended adjectival projection. As for the second question: in Corver (2006), I propose an analysis of attributive adjectival modification according to which the adjective phrase originates as a postnominal predicate and undergoes leftward movement to a prenominal position (cf. also Kayne 1994). A phrase like *een mooi-e auto* (a beautiful-AGR car) is assigned the structure in (i), where the underlying predication relation is configurationally defined in terms of a small clause structure XP, with the inflection –*e* as the small clause head that raises to a higher functional head F into whose Spec-position the adjectival predicate moves. Schematically:

(i) [$_{DP}$ een [$_{FP}$ *mooi*$_i$ [$_{F'}$ F (= -Ø) +X$_j$ (= -e) [$_{XP}$ auto [$_{X'}$ t$_j$ t$_i$]]]]]

A pattern like *een [vreselijk-e mooi-e] auto* (an extreme-AGR beautiful-AGR car; 'an extremely beautiful car') can be assigned the structure in (ii), where *vreselijk* is a degree-designating adjective that has undergone Predicate Fronting (i.e. A-bar type predicate displacement) to Spec,DegP with concomitant head movement of the small clause head X (i.e. –*e*) to Deg. After –*e* has raised to Deg, it occupies an edge position within the extended adjectival projection, from where it can enter into an agreement relation with the noun *auto*. See Corver (2006) for a more elaborate discussion.

(ii) [$_{DP}$ een [$_{FP}$ [$_{DegP}$ vreselijk$_n$ [$_{Deg'}$ [$_{Deg}$ –e$_k$] [$_{XP}$ [$_{AP}$ mooi] [$_{X'}$ t$_k$ [$_{AP}$ t$_n$]]]]]$_i$ [$_{F'}$ F (= -Ø) +X$_j$ (= -e)
    [$_{XP}$ auto [$_{X'}$ t$_j$ t$_i$]]]]]

'under one's breadth; between one's teeth'
c. **'s** Zondag**s**
  -s Sunday-s
  'on Sundays'

These linguistic expressions feature two instances of the bound morpheme –*s*, which is traditionally analyzed as a genitival case suffix. One –*s* follows the bare noun: *hoofd* in (9a), *mond* in (9b) and *Zondag* in (9c). The other –*s* occurs in between the adjective *bloot* and the bare noun in (9a) and in between the preposition *binnen* and the bare noun in (9b). In (9c), the initial –*s* is not preceded by any overt element. It is this intermediate/initial occurrence of –*s* that is traditionally qualified as being proleptic; it anticipates the occurrence of the final –*s* that is right-attached to the noun.

At first sight, the phenomenon of -*s*-prolepsis exemplified in (9) appears to be of the morphological type: a bound morpheme (–*s*) appears on an element X (e.g. the adjective *bloot* or the preposition *binnen*) which does not seem to be a regular host of –*s* and which is followed by an element Y (the noun *hoofd*) which ís a regular host of -*s*. I will propose an analysis, however, according to which this phenomenon of –*s*-prolepsis is analyzed in terms of movement and copying. More specifically, I will argue that in (9a) and (9b), -*s* is a (small clause) head that undergoes head movement to a higher functional position F and leaves behind a copy (i.e. –*s*) that may surface phonetically. Thus, the proleptic –*s* in *bloot-s-hoofd-s* and *binnen-s-mond-s* is in fact a displaced element (i.e. the head of a chain) and the final –*s* in the string is a phonetic realization of the lower chain link. The phenomenon of –*s* prolepsis in (9c) will receive the same analysis (i.e. movement and copying). In this construction, however, -*s* will be analyzed as a (weak) demonstrative pronoun rather than a small clause head.

The article is organized as follows: In section 2, I will discuss the phenomenon of –*s* prolepsis in construction (9a), which is traditionally referred to as an absolute genitival construction. In section 3, I present an analysis of this construction based on the idea that it features predicate displacement and that –*s* is a nominal copular element that gets spelled out at PF. It will be shown that this analysis cannot account for the multiple realization of –*s* in (9a). Therefore, an alternative analysis will be developed in section 4 which also starts from predicate displacement but assigns a different interpretation to –*s*. This element is analyzed as a small clause head that undergoes head movement, creating a chain whose members can both be spelled out phonetically. This analysis will be elaborated on in section 5, which discusses the phenomenon of –*s* prolepsis in (9b). Section 6 presents an analysis of the pattern in (9c) in terms of movement and copying of a weak demonstrative pronoun. Section 7 is the conclusion.

2. –*s* prolepsis in the absolute genitival construction
Let us start our discussion of –*s* prolepsis by giving some additional examples of the absolute genitival pattern.

(10) a. bloot**s**hoofd**s** (bare-s-head-s; 'bare headed ')
    b. heel**s**hoofd**s** (whole-s-head-s; 'unhurt')
    c. heel**s**huid**s**   (whole-s-skin-s; 'without injury')
    d. goed**s**moed**s** (good-s-heart-s; 'cheerful')
    e. bloot**s**been**s** (bare-s-leg-s; 'with bare legs')
    f. droog**s**mond**s** (dry-s-mouth-s; 'with a dry mouth')

g. luid**s**keel**s**   (loud-s-throat-s; 'at the top of one's voice')
h. droog**s**oog**s**   (dry-s-eye-s; 'with dry eyes')

This pattern features two occurrences of –*s*. One –*s* follows the noun *hoofd*. The other –*s* occurs in between the adjective (*bloot*) and the noun (*hoofd*). The way in which *blootshoofds* is pronounced suggests that this intermediate –*s* (phonologically) attaches to the preceding adjective rather than to the following noun; i.e. in slow speech, *blootshoofds* is pronounced as *bloots + hoofds*, and not as *bloot + shoofds*.[3] It is this intermediate –*s*, which gets attached to the adjective, that is traditionally qualified as being 'proleptic'; it anticipates the occurrence of the final –*s* that is attached to the noun.

It is clear that the absolute genitival construction in (11a) has a certain resemblance to the absolute *met* ('with') construction in (11b):[4]

(11) a. Jan liep [blootshoofds] de tuin in
         Jan walked bare-s-head-s the garden into
         'Jan walked into the garden bare headed'
     b. Jan liep [met het hoofd bloot] de tuin in
         Jan walked with the head bare the garden into

The two absolute constructions have the same interpretation. They both mean: 'with the head (being) bare.' Thus, an adjective (*bloot*) is predicated over an external argument/subject (*(het) hoofd*). An obvious difference between the two absolute constructions concerns the word order of the nominal subject and the adjectival predicate. The absolute *met* construction displays a straight order (subject-predicate), whereas the genitival absolute construction exhibits an inverted order (predicate-subject). Under the assumption that the subject predicate relationship in (11b) is configurationally defined in terms of a small clause structure (cf. Stowell 1983), the structure in (12) could be assigned to the absolute construction in (11b):[5]

(12) [$_{PP}$ met [$_{XP}$ het hoofd [$_{X'}$ X bloot]]]

If we take the order 'subject predicate' to be the base order, we must conclude that the absolute genitival construction features predicate displacement. That is, the adjectival predicate undergoes leftward movement across the small clause subject to some higher Spec position. Schematically:[6]

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[3] Another interesting phonological property of this construction type is its stress pattern. In Dutch dictionaries, two possible stress patterns are given: one pattern with stress on the first element (e.g. *BLOOTshoofds*), another pattern with stress on the second element (e.g. *blootsHOOFDs*). The first stress pattern is similar to the stress pattern found with compounds (e.g. *een SNELtrein*; a fast train, 'an intercity train'), the second stress pattern is similar to the one found with syntactic phrases, e.g. *een bloot HOOFD* (a bare head). The co-existence of these two patterns suggests that at this stage of the Dutch language, the construction has an ambiguous status, i.e. it can be a purely morphological construct or a purely syntactic construct. In this article, I will concentrate on the analysis of the syntactic pattern.

[4] See Van Riemsdijk (1978) for discussion of certain properties of the Dutch absolute *met* construction.

[5] See Beukema and Hoekstra (1984) for a small clause analysis of the absolute *met* construction.

[6] Since the order A+N is also the order found with attributive adjectives in Dutch (e.g. *een bloot hoofd*, a bare head), one may wonder whether *blootshoofds* could involve an attributive adjective rather than an (inverted) predicative one. Evidence for the non-attributive status seems to come from the systematic absence of the inflectional marker –*e* that typically attaches to attributive adjectives (e.g. *een blot-e man*; a naked-AGR man) except for those attributive adjectives that modify indefinite neuter singular nouns (e.g. *een bloot hoofd*).

(13) [$_{FP}$ bloot$_j$ [$_F$ F [$_{XP}$ hoofd [$_{X'}$ X t$_j$]]]]

If FP is PP, we get the derived structure in (14).[7] Even though the parallelism with the absolute *met* construction is suggestive for a PP-analysis of the entire construction, I will leave the issue of the exact categorial status of FP in (13) aside and simply use FP in the rest of the article.

(14) [$_{PP}$ bloot$_j$ [$_{P'}$ P [$_{XP}$ hoofd [$_{X'}$ X t$_j$]]]]

The question arises as to how the bound morpheme –*s* fits into this representation. In what follows, I will explore a number of possible analyses, finally proposing that –*s* is a determiner-like element that functions as a small clause head (X) that takes the predicate as its complement (e.g. *bloot*) and the subject (*hoofd*) as its specifier. Thus, the linguistic expression *blootshoofds* starts from the 'base structure' in (15a). The inverted surface pattern *blootshoofds* is obtained by movement of the adjectival predicate across the small clause subject and concomitant raising of the small clause head –*s* to the functional head whose specifier position is occupied by the displaced predicate. Duplication of -*s* follows from the copy theory of movement: the moved small clause head –*s* leaves behind a copy. This is

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Consider, for example, (10f), which contains the non-neuter noun *mond*. As shown in (i), an attributive adjective that modifies the noun *mond* always carries the inflectional morpheme -*e*:

  (i) a. een drog-e mond
         a dry-AGR mouth
    b. de drog-e mond
         the dry mouth

  The systematic absence of the attributive inflectional marker –*e* in absolute genitival constructions (e.g. *drog(* -e)-s-mond-s*; dry(-AGR)-s-mouth-s) suggests that the adjective is not an attributive one.
    According to the analysis given in (13), *bloot* is an inverted phrasal predicate and *hoofd* is a phrasal subject. The question arises as to why more complex phrases are excluded as predicates (cf. (iia)) or subjects (cf. (iib)) in these 'absolute genitival constructions'.

  (ii) a. *[erg luid]keel-s   (compare (10g))
           very loud throat-s
           'with a very loud voice'
      b. *bloot-s-[groot hoofd-s]   (compare (10a))
           bare-s-big head-s
           'with a big head bare'

  I have no answer to the question why the subject and the predicate can only be bare words. See section 4.3, though, for some thoughts on the question of why the inverted predicate must be a bare word.

[7] Van Riemsdijk (1978) discusses absolute constructions like (i). The motional PP seems to have moved from a position following the subject (*die boef*) to a position preceding the preposition *met*. The structure may be then as in (ii).

    (i)   De gevangenis in met die boef!
              The jail into with that rascal
              'To jail with that rascal!'

    (ii)   [$_{PP}$ [de gevangenis in]$_i$ [$_{P'}$ met [$_{XP}$ die boef [$_{X'}$ X t$_i$]]]]

represented in (15b), where, for the sake of clarity, I have co-superscripted the two copies. As indicated, the copy of the displaced predicate must de deleted. A question which obviously arises is why the lower –*s* copy may surface but not the lower predicate copy.

(15) a. [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s] [$_{AP}$ bloot]]]
    b. [$_{FP}$ bloot^j [$_{F'}$ [–s^i]+F [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s^i] ~~bloot^j~~]]]]

Another characteristic of this absolute construction is the fact that there is variation in the appearance of –*s*. Besides the duplication pattern, in which two instances of –*s* are found (see (10)) for some illustrations), we have a pattern in Dutch in which –*s* only occurs in the intermediate position (i.e. A + -s + N) and a pattern in which it appears only on the final noun (i.e. A + N + -s). Some illustrations of the three patterns are given in (16)-(18) (data from Royen 1948, who cites sentences taken from texts of Dutch writers). Obviously, the question needs to be addressed how this variation in the distribution of the bound morpheme –*s* can be accounted for.[8]

(16) a. Dan rijkt   de provoost,   ***blootshoofds***, op den overloop aan Jacob Claeszoon
        Then reaches the provost-sergeant, bare-s-head-s, at   the landing to Jacob Claeszoon
        een brood en   kruik wijn   (v. der Woude, 246; Royen 255)
        a   bread and jar   wine
    b. Marie is ***blootshoofds*** en   in haar daagsche   kleer (de Man, Marie of 89; Royen 255)
        Marie is bare-s-head-s and in her   daily   clothes
    c. een paard…dat door een jongen, ***blootsvoets*** en   ***blootshoofds***, die er   naast
        a   horse…that by   a   boy   bare-s-foot-s and bare-s-head-s that there next-to
        liep,   geleid werd   (Scott, Zeerover 198; Royen 255)
        walked, guided was
    d. en nog….acht   ik het mirakel   er   ***heelshuids***   te zijn afgekomen
        and still….consider I it   (a)miracle there whole-s-skin-s to be   gotten-off
        (Bosb.-Touss I, 93; Royen, 254; fn 61)

(17) a. De man staat   ***blootshoofd***, hij kijkt over de baar   (v. der Woude 224; Royen, 254)
        The man stands bare-s-head, he looks over the bier
    b. Zij was ***blootshoofd*** en   de grillige   stralen der   ondergaande zon wierpen een
        She was bare-s-head and   the capricious beams the-GEN setting   sun threw   a
        roosachtigen gloed op haren glinsterenden haardos.   (Corelli, Schat 220; Royen, 254)
        rose-like   glow on her   glittering   head-of-hair

(18) a. Oude Williams, ***bloothoofds*** en   in zijn hemdsmouwen   (Hall, 136; Royen 255)
        Old   Williams, bare-head-s and in his   shirt-sleeves
    b. …trekt Horatius zonder iets   te zeggen het natte bosch in, ***bloothoofds***
        ..goes Horatius without something to say   the wet   woods into, bare-head-s
        met zijn regenjas los   over de schouders   (v. der Hallen: De aarde roept; Royen 255)

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[8] Royen (1948: 256) gives one example (from older Dutch) in which the three variants of the absolute genitival construction occur in one sentence:

 (i) Och lieve here, wilt blijsmoets zijn, al muegdy blootshooft ende bervoets sijn, …
     Oh good Lord, want-you happy-s-mind-s be, though might-you bare-s-head and bare-foot-s be
     'Oh good Lord, may you be good-tempered, even if you are bare headed and barefooted'

with his rain-coat loosely over the shoulders
    c. Terwijl men *openmonds*   staarde naar de weeldeverschijning (Couperus, 245; Royen 64)
       While   one open-mouth-s stared at   the luxury-appearance
    d. En de kinderen Israels wandelden *droogvoets* door   het midden van de zee
       And the children Israels walked   dry-foot-s through the middle of   the sea

3. Predicate displacement and –*s* as a nominal copula

I will start my analysis of –*s* prolepsis and –*s*-duplication (i.e. the multiple realization of –*s*) in absolute genitival constructions by addressing the question as to what kind of grammatical element –*s* really is. Historically, -*s* is a genitival case suffix that appeared on masculine and neuter singular nouns in Middle Dutch (1200-1500); see Stoett 1923, Van Loey 1980. It appeared in various functions, among which the partitive genitive (19a), the genitive of measure (19b), the possessive genitive (19c,d), and the absolute genitive (19e); examples taken from Stoett (1923)

(19) a. een lepel *honichs*
        a   spoon honey-GEN
        'a spoonful of honey'
    b. Sijn aenscijn   was *eens*   *voets*   breet
        His appearance was one-GEN foot-GEN broad
        'His appearance/shape was one foot broad'
    c. die *Gods*   genade
        that God-GEN mercy
        'the mercy of God/ God's mercy'
    d. die   sone *Jacobs*
        those sons Jacob-GEN
        'Jacob's sons'
    e. gesont**s**   *lijfs*
        healthy-GEN body-GEN
        'with a healthy body'

Present-day Dutch is heavily deflected; in many environments, genitive case is no longer present. Compare, for example, (20a,b) with (19a,b):

(20) a. een lepel   honing
        a   spoon honey
        'a spoonful of honey'
    b. Het was [een voet breed]
        It   was one foot wide
        'Its width was one foot'

In constructions in which –*s* is still present, it displays a grammatical behavior which is different from the Middle Dutch genitival case suffix. In present-day Dutch, for example, the possessive –*s* only appears on prenominal possessors (21a); postnominal placement is impossible (21b). Furthermore, when it is in prenominal position, it cannot co-occur with a preceding determiner (21c). Finally, it can also occur on feminine nouns (21d):

(21) a. Jacob**s** zonen
        Jacob-s sons
    b. *de zonen Jacob**s**
        the sons Jacob-s
    c. *de Jacob**s** zonen
        the Jacobs sons
    d. Marie**s** zonen
        Mary-s sons

Also for absolutive genitives like *blootshoofds* (bare-s-head-s), there are reasons for saying that *–s* is no longer a genitival case suffix. In Middle Dutch, it typically appeared on masculine/neuter singular nouns. In the course of the development of Dutch, it was also found on nouns that used to be feminine in Middle Dutch. The pattern *luid-s-keel-s* (loud-s-throat-s; 'with a loud voice'), for example, used to be *luider kele* (loud-gen.fem.sg voice.gen.fem.sg) in Middle Dutch. According to Royen (1948: 254), this pattern changed into the 'transition form' *luider keels*, which finally changed into the pattern *luitkeels* or *luitskeels*. In the latter example, we find the proleptic *–s* in between the adjective *luit* and the noun *keel*.

In view of the above considerations, it seems fair to conclude that *–s* can no longer be analyzed as a genitival case suffix (see also Corver 1990, De Wit 1997, Weerman and De Wit 1999). The question therefore arises as to how to interpret this grammatical element. In recent years, the 'possessive' *–s*, which appears in constructions like (21a), has received a variety of analyses. It has been analyzed as a functional head D within the extended nominal projection, as in (22a) (cf. Corver 1990, De Wit and Weerman 1999, Van Kampen en Corver 2005). As an alternative, it has been proposed that *–s* is a possessive marker (i.e. a functional head Pos) heading a projection Pos(sessor)P(hrase); see (22b) (cf. Schoorlemmer 1998, Van de Craats et al 2000).

(22) a. [$_{DP}$ Jacob [$_{D'}$ –s [$_{NP}$ zonen]]]
    b. [$_{DP}$ D [$_{PosP}$ Jacob [$_{Pos'}$ –s [$_{NP}$ zonen]]]]

These analyses do not seem to be extendable in a straightforward way to absolute genitival constructions like *blootshoofds*. For one thing, it is not immediately clear what a determiner-like element or a possessive marker is doing on an adjectival constituent (i.e. *bloot-s*).

In Den Dikken (1998) an alternative analysis is proposed according to which *–s* is a nominal copula, i.e. a bound morphemic equivalent of the preposition-like element *van* (English: *of*; French *de*) that appears in nominal constructions featuring DP-internal predicate displacement (see also Corver 2000). A well-known case is the *N of/van N* construction in (23) (cf. Kayne 1994, Den Dikken 1995, 2006):

(23) a. die [$_{Pred}$ idioot] van een [$_{SU}$ dokter]
    b. that [$_{Pred}$ idiot] of a [$_{SU}$ doctor]

Let us briefly dwell on the predicate displacement analysis of these constructions, as given by Den Dikken (see also Bennis, Corver and Den Dikken 1998), before we turn again to the possessive constructions featuring *–s*. Certain parts of this analysis will turn out to be relevant for my ultimate analysis of absolute genitive constructions in Dutch.

Under a DP-internal predicate displacement analysis, a construction like (23a) can be assigned the derived representation in (24):[9]

(24) [$_{DP}$ die [$_{FP}$ idioot$_j$ [$_{F'}$ [F (= van) +X$_i$ (= een)] [$_{XP}$ dokter t$_i$ t$_j$]]]]

The structural representation in (24) is derived as follows: the predicate nominal *idioot* starts out as the predicate of a small clause XP, whose subject is *dokter*. The predicate nominal undergoes DP-internal movement to the specifier position of a functional projection FP, which is the complement of D (realized here by the demonstrative determiner). This predicate movement operation is considered to be of the A-movement type. Direct movement of *idioot* to Spec,FP appears to be non-local, as the predicate skips an intermediate A-position, viz. the one occupied by the subject *dokter*. Movement of the predicate nominal is local, however, if one adopts Chomsky's (1993) theory of equidistance: the moved predicate can cross the small clause subject as long as the two nominals are equally far away from the extraction site. This situation is obtained if domain extending head movement applies, i.e. X-to-F movement.[10] A mininal domain is created that contains both the subject and the predicate. With Den Dikken (1995), I will assume that *van* in (24) is the surface reflex of the obligatory application of X-to-F raising in the derivation of *N van een N* constructions. In other words, the surface distribution of *van* is ruled by structural factors (domain extension); more specifically, the grammatical element *van* that appears in the *N van een N* construction is not a lexical primitive but the overt realization (i.e. Spell Out) of the functional head F. The appearance of this meaningless *van* in contexts of DP-internal predicate inversion is taken to be parallel to the obligatory appearance of the copula *to be* in contexts of clause internal predicate inversion (see Moro 1988, 1991):

(25) a. I consider [John (to be) the best candidate]   (straight order: subject - predicate)
    b. I consider [the best candidate *(to be) John] (inverted order: predicate – subject)

Thus, *van* is the nominal equivalent of *to be*. It is a 'nominal copula'.[11]

With this analysis of the *N of/van N* construction in mind, let us return to the Dutch possessive constructions featuring *–s*. Den Dikken (1998) proposes that *–s* is another instance of the 'nominal copula'; it is the bound morphemic equivalent of the nominal copula *van* (see also Corver 2000). Thus, it occurs in contexts of DP-internal predicate inversion. It is proposed then that possessive constructions like (21a), involving a prenominal possessor, feature predicate movement of the possessor. More specifically, the possessor starts out as a (dative) PP (headed by an empty P), which is the predicate of the small clause XP, and the possessed noun starts out as the subject of the predication relation. Predicate displacement involves fronting of the dative PP to Spec,FP; the P assigning dative case has been incorporated into the small clause head X, and this complex has subsequently been incorporated into F for reasons of domain extension. Schematically:

(26) a. [$_{DP}$ Spec [$_{D'}$ D [$_{FP}$ Spec [$_{F'}$ F [$_{XP}$ POSSESSUM [$_{X'}$ X [$_{PP}$ P POSSESSOR]]]]]]]

---

[9] As indicated, I assume that the raised small clause head is right adjoined to F. This adjunction structure is in line with the linear ordering of the nominal copula (*van*) and the raised small clause head (*een*).
[10] The derivation in (24) can also be captured under Chomsky's (1995:356-357) reformulation of equidistance. See Den Dikken (2006: 114) for discussion of Chomsky's (1995) theory of equidistance in relation to predicate inversion structures. In this article, I will simply stick to Chomsky's (1993) original definition.
[11] I will get back to the grammatical status of the element *een* in the *N van (een) N*-construction in section 4.1

b. $[_{DP}$ Spec $[_{D'}$ D $[_{FP}$ $[_{PP}$ t_k Jacob$]_i$ $[_{F'}$ F (= -s)+X_j+P_k $[_{XP}$ zonen $[_{X'}$ t_j t_i]]]]]]

The question arises as to whether this analysis of –*s* as a nominal copula can be extended to the analysis of absolute genitival constructions in (10). An important characteristic of these constructions is, of course, the fact that we have an inverted order: the (adjectival) predicate precedes the subject. Remember that according to Den Dikken's analysis the occurrence of the nominal copula –*s* is dependent on the application of predicate inversion within the noun phrase. Under a predicate inversion analysis of absolute genitival constructions, we would roughly have the 'base structure' in (27a) and the derived, inverted structure in (27b):

(27) a. $[_{XP}$ hoofd $[_{X'}$ X $[_{AP}$ bloot]]]
       b. $[_{FP}$ bloot$_j$ $[_F$ F (= -s)+X_i $[_{XP}$ hoofd $[_{X'}$ t_i t_j]]]]

(27b) surfaces as *blootshoofd*, which ís a pattern that is attested; cf. (17). Notice, however, that this analysis does not predict the occurrence of the duplication pattern *blootshoofds*. If -*s* is the surface realization of F, then the appearance of –*s* after *hoofd* remains unexplained. Under this analysis, -*s* cannot possibly be analyzed as the phonetic instantiation of the trace of the small clause head X. The appearance of this second –*s* would be in need of an independent explanation. Notice also that the pattern *bloothoofds*, with –*s* appearing only at the end of the absolute expression, does not follow either from this analysis. If predicate inversion applied (with compulsory X-to-F raising), the appearance of the nominal copula –*s* in between *bloot* and *hoofd* would be expected.

In conclusion, -*s* duplication cannot be accounted for if –*s* is interpreted as a nominal copula (i.e. the spell out of the functional head F)

4. Predicate displacement and –*s* as a spurious definite article
4.1 The spurious article *een*
In the previous section, we came to the conclusion that –*s* in absolute genitive constructions like *blootshoofds* cannot be interpreted as a nominal copula. If –*s* is the spell-out of the head F, then the appearance of –*s* on the noun is still unaccounted for. We would need an independent explanation for its appearance. In that case, *blootshoofds* would not instantiate a duplication pattern in which the two bound morphemes –*s* would be related to each other (more specifically: would be copies of the same lexical item). And, consequently, one could not interpret the first occurrence of –*s* as an instance of –*s* prolepsis.

In what follows, I will explore an alternative analysis of –*s* which ís compatible with a duplication interpretation of the absolutive pattern *blootshoofds*. Remember from my discussion of the *N van N* construction, that displacement of the predicate nominal (e.g. *idioot* in (24)) across the small clause subject (*dokter* in (24)) can only take place if the small clause head X undergoes head-movement to the functional head F into whose specifier the inverted predicate lands. This X-to-F movement operation was needed for reasons of locality (i.e. equidistance). As indicated by the representation in (28), the small clause head is taken to be the indefinite article *een* that precedes the second Noun (i.e. the subject noun) in the *N van een N* construction. Under a copy theory of movement (see Chomsky 1993), the representation in (24) would be as in (28), with the 'traces' being crossed, which indicates that they are not pronounced.

(28) $[_{DP}$ die $[_{FP}$ idioot^j $[_{F'}$ [F (= *van*) +X^i (= *een*)] $[_{XP}$ dokter $[_{X'}$ ~~een~~^{i} [~~idioot~~^{j}]]]]]]

Suppose now that the –s that appears in the genitival absolute construction is a small clause head X as well. In that case, we would have the underlying structure in (29a). After application of predicate displacement with concomitant X-to-F movement, we end up with the structure in (29b), adopting the copy theory of movement.[12] The surface pattern *bloot-s-hoofd-s* can be derived if the lower –s copy ('the trace') is able to 'survive' at PF and the lower copy of the displaced adjectival predicate *bloot* gets deleted.

(29) a. [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s] [$_{AP}$ bloot]]]
    b. [$_{FP}$ bloot^j [$_{F'}$ [$_X$ –s]^i+F [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s]^i ~~bloot~~^{j}]]]]

In what follows, I will elaborate on the small clause head status of –s in absolute genitival constructions. Our starting point for this analysis of –s is the analysis of *een* in the *N van een N* construction as given in Bennis, Corver and Den Dikken (1998).

As shown in Bennis, Corver and Den Dikken (1998), the indefinite article *een* that appears in contexts of DP-internal predicate displacement displays a special behavior; more specifically, *een* does not seem to 'belong to' the noun that follows it, nor in fact to the noun that precedes it. Normally, the indefinite article is compatible with singular noun phrases only (see (30a,b)). Furthermore, it does not cooccur with proper names and mass nouns (see (30c,d)).[13]

(30) a. Ik heb een boek gelezen
        I have a book read
        'I read a book'
    b. *Ik heb een boeken gelezen
        I have a books read
    c. *Ik heb een Westertoren gezien
        I have a Westertoren seen
    d. *Ik heb een spinazie gegeten
        I have a spinach eaten

Notice now that the indefinite article *een* that appears in the *N van een N* construction displays a grammatical behavior which is different from that of the 'normal' indefinite article *een*. As illustrated in (31a), the second noun of the *N van een N* construction may be plural (30a). As shown in (31b) and (31c), respectively, *een* may also precede proper names and mass nouns.

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[12] As indicated in (29b), I will assume that the small clause head –s left-adjoins to F. In this respect, it differs from the small clause head *een* in (28). As we will see later, though, there may be patterns in which –s also right-adjoins to F.

[13] The examples (30b) and (30d) are well-formed when they have an exclamative intonation pattern:

   (i)   Ik heb een boeken gelezen!
           I have a books read
           'How many books I read!'

   (ii)   Ik heb een spinazie gegeten!
           I have a spinach eaten
           'How much spinach I ate!'

  Following Bennis, Corver and Den Dikken (1998), I will assume that *een* in these exclamative noun phrases is the spurious indefinite article and that there is an empty operator-like element present that has undergone DP-internal predicate fronting. Schematically: *[$_{DP}$ OP$_j$ [$_{D'}$ een$_i$ [$_{XP}$ boeken/spinazie [$_{X'}$ t$_i$ t$_j$]]]]*.

That *een* does not belong either to the preceding noun (i.e. the displaced predicate) is shown by the existence of examples like (31d), in which the first noun (and also the second one) is plural (data drawn from Bennis, Corver and Den Dikken 1998).

(31) a. $^{?}$die ramp van een getalscongruentiefeiten
    that disaster of a number agreement facts
  b. die pracht van een Westertoren
    that beauty of a Westertoren
  c. een pracht van een spinazie
    a beauty of a spinach
  d. die schatten van een kinderen
    those darlings of a children

In view of its grammatical behavior, which is different from that of the regular indefinite article, Bennis, Corver and Den Dikken analyze the indefinite article in the Dutch *N van een N* constructions as a spurious indefinite article. They further point out that this spurious article shows up in other types of nominal constructions featuring predicate displacement, among which the wh-exclamative construction in (32):[14]

(32) [Wat een boeken] heb jij gelezen!
    What a books have you read
    'Boy, did you read a lot of books!'

In (32), we have an exclamative DP, consisting of the wh-word *wat*, the indefinite article *een* and the plural noun *boeken*. The article *een* is interpreted as being spurious, since it does not seem to go with any of the surrounding nominal elements: the plural noun *boeken* normally does not combine with *een* (see (30b)) and the wh-word *wat* typically does not combine with any article.

Bennis, Corver and Den Dikken analyze (32) as a noun phrase (DP) in which predicate displacement has applied. The exclamative noun phrase in (32) is assigned the derived structure in (33): The wh-word *wat* starts out as a predicate nominal and undergoes DP-internal predicate fronting (i.e. A-bar type predicate movement) to the specifier position of the functional head D, which carries the 'force' feature [+EXCL]. Bennis, Corver and Den Dikken (1998) argue that, quite analogously to the Verb Second effect in (main) clauses featuring wh-movement, movement of *wat* to Spec,DP requires the D-head to be lexical (i.e. phonetically realized) in exclamative DPs.[15] The idea is that raising of the small clause head *een* to D provides the [+EXCL] D-head with lexical content.

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[14] Another nominal construction in which the spurious indefinite article *een* shows up is the well-known *wat voor*-construction. See, for example (i):

  (i)   [Wat voor een boeken] heeft Jan gelezen?
      What for a books has Jan read
      'What kind of books did Jan read?'

  See Bennis, Corver and Den Dikken (1998) for discussion of this construction.

[15] Thus, raising of the spurious indefinite article *een* to a higher functional head has a different function in the case of Predicate Inversion (Predicate movement of the A-type) and Predicate Fronting (Predicate movement of the A-bar type). In the former case, raising of *een* takes place for reasons of domain extension (equidistance), in

(33)   [$_{DP}$ wat^j [$_{D'}$ [$_{D[+excl]}$ een^i] [$_{XP}$ boeken [$_{X'}$ ~~een^i wat^j~~]]]]
      what   a   books
   'how many books!'

The question arises as to whether the –s that appears in genitival absolute constructions may also be analyzed as a spurious article that functions as a small clause head X that 'mediates' between a subject and a predicate. In the next section, we will see that the bound morpheme –s does display (definite) article-like behavior. Furthermore, its semantically impoverished meaning makes it a good candidate for a mediating small clause head.

4.2 –s as a spurious definite article
A first indication of the article-like status of –s comes from its appearance on proper names and kinship terms that function as arguments of a lexical head in certain dialects of Dutch. Take, for example, the following expressions (cf. Van Haeringen1947, Overdiep 1937, Royen, 1948):

(34) a. *Vaoders* is ziek
      Father-s is ill
      'Father is ill'
   b. […] *moeders* vroeg, of ik met je praten wou
      …. Mother-s asked, whether I with you (to)talk wanted
      'Mother asked whether I would like to talk with you'
   c. Heb je d'r ook an *Dominees* niks van verteld
      Have you there also to Vicar-s nothing about told
      'Didn't tell anything to the vicar either'
   d. We kwamen *Anna's* tegen
      We met Anna-s PRT
      'We met Anna'

Vaoders in (34a) carries what looks like a genitival suffix –s. In traditional Dutch grammars, these expressions are therefore called "genitival proper names/kinship terms" (cf. Overdiep (1937)). The question, though, arises as to why a genitival suffix would be present on these nouns. The noun phrase *vaoders* in (34a) has the grammatical function of subject and would consequently expected to be associated with (abstract) nominative case. Notice also that there is no way in which *vaoders* can be assigned the meaning of a possessor; there is simply no possessive relationship involved here. So, what could –s be in this case?

    A plausible line of thought one might explore is the following: Under the assumption that noun phrases functioning as arguments are always DPs, a proper name like *Anna* in (34d) must be analzyed as a DP whose determiner is lexically empty (cf. Longobardi 1994, Stowell 1991). As argued for in Longobardi (1994), the proper name receives an object-referring (i.e. referential) interpretation when it moves (overtly or covertly) to D (i.e. N-to-D raising).

(35) a. We kwamen Anna   tegen
      We met   Anna   PRT
   b. We kwamen [$_{DP}$ [$_D$ *e*] [$_{NP}$ Anna]] tegen

---

the latter case, movement of *een* is a kind of Verb Second effect in the nominal domain. See Bennis, Corver and Den Dikken (1998) for discussion.

Another way for the proper name expression to receive a referential interpretation is the presence of an overt definite article (as, for example, in Greek or certain dialects of Dutch: e.g. *de Jan*, the Jan, 'Jan'). As Longobardi (2001) notes, such a definite article seems to have an impoverished semantic function. Following Vergnaud and Zubizarreta (1992), he calls this definite article an expletive article, since its role is essentially that of relating a noun (i.e. a proper name) to the functional head D, where it could have been, but was not, moved.

Turning now to the examples in (34), the interpretation of *–s* seems straightforward: -*s* may be interpreted as an expletive, bound-morphemic definite article. I will assume that N-to-D raising takes place, so that the affixal *–s* gets attached to a host.[16] Schematically:

(36) [$_{DP}$ [$_D$ [$_N$ Anna]$_i$ –s] [$_{NP}$ t$_i$]]

Quite interestingly, as noted by Van Haeringen (1947; 255), -*s* only appears on bare proper nouns. It nevers appears on a noun like *vader* (father) when it is part of a complex DP introduced by a definite article. This contrast is illustrated by the following minimal pair taken from Van Haeringen (1947).

(37) a. Laten we *vaders* daar nou maar buiten houden
Let we father's there but outside keep
'Let's keep father out'
  b. *Laten we *die arme vaders* daar nou maar niet mee lastig vallen
Let we that poor father's there but not with bother
'Let's not bother poor father with this'

This complementarity of *–s* and the definite article *de* is also found with family names. In the Dutch dialect of Oerle, for example, expletive definite articles occur both with Christian names (e.g. *de Jan*, 'the Jan') and family names (e.g. *de Munnikhof*; 'Munnikhof'); cf. De Bont (1958: 376 ff.). Interestingly, besides the pattern 'definite article + family name' one also finds the pattern 'family name + -s'. Patterns of the type 'definite article + family name + -s' do not seem to occur, which suggests that *–s* fulfils the same role as the definite article *de*:

(38) a. de Mander   Manders   *de Manders
    b. den Börger   Börgers   *den Börgers
    c. den Danker   Dankers   *den Dankers
    d. de Sander   Sanders   *de Sanders

Evidence for the definite article-like status of *–s* is also available from present-day Dutch. Consider the following examples containing proper names expressing days of the week:[17]

(39) a. Dinsdag is een fijne dag voor mij om te komen

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[16] Obviously, this bound morphemic definite article reminds us of the enclitic articles in languages like Romanian and Norwegian:

 (i)a. hus-et (house-the, 'the house')
     b. lup-ul (wolf-the, 'the wolf')

[17] (40b) is used in colloquial/sub-standard Dutch.

Tuesday is a nice day for me CONJ to come
b. **De** dinsdag is een fijne dag voor mij om te komen
The Tuesday …..
c. Dinsdag**s** is een fijne dag voor mij om te komen
Tuesday-s …..
d. ***De** Dinsdag**s** is een fijne dag voor om te komen
The Tuesday-s ……

(40) a. Ik kom Maandag nooit thuis
I come Monday never home
b. Ik kom **de** Maandag nooit thuis
….the Monday….
c. Ik kom Maandag**s** nooit thuis
…..Monday-s…..
d. *Ik kom **de** Maandag**s** nooit thuis
…the Monday-s….

In the a-examples, we have a bare proper name, which arguably involves covert raising of the noun to D. The b-examples feature an expletive definite article. In the c-examples, we find the bound morphemic article –*s*. The d-examples, finally, show that *de* and –*s* are in complementary distribution, which suggests that these elements compete for the same structural position.

   A final illustration for the article-like status of –*s* comes from the exclamative expressions in (41), which are typically used as swear-words or strong phrases.

(41) a. Drommel**s**!   (Devil-s; 'By Jove! By gum!')
    b. Deksel**s**!   (Deuced-s; 'the Deuce!')
    c. Duivel**s**!   (Devil-s; 'the Deuce!')
    d. Mieter**s**!   (Damned-s; 'Super/Wizard!)'
    e. Bliksem**s**!   (Lightning-s; 'What the blaze!')
    f. Donder**s**!   (Thunder-s; 'The devil!')

Interestingly, some of these expressions have the following equivalents:

(42) a. te drommel!   (also: de drommel!)
    the deuce
    b. te deksel!   (also: de deksel!)
    the deuce
    c. te duivel!   (also: de duivel!)
    the devil!

The element *te* in these examples is an allomorph of the definite article *de* (cf. Royen 1948: Part II, 116). The dental consonant /d/ is 'sharpened' in this exclamative expression and becomes a voiceless dental stop /t/. Importantly, combinations like *te drommels!* are not attested, which suggests that *te* and –*s* fulfil a similar grammatical role within the noun phrase, viz. that of a definite article. An expression like *Drommels!* may then be derived by application of N-to-D movement. Importantly, -*s* in (41), just like *te* in (42), does not seem to

have a referential interpretation. As such, it may be characterized as an expletive definite article; i.e. an article whose main grammatical function is to fill a structural position.[18]

Another example which is suggestive for the definite article-like status of –s comes from the dialect of Groningen (cf. Ter Laan 1953). In this dialect –s appears on nominal infinitives. As shown in (43) and (44), present-day standard Dutch uses the definite article in these constructions:[19]

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[18] A potential argument against an analysis according to which the exclamative expressions in (41) and (42) are DPs headed by an expletive D might be the fact that, in a language like German, vocative proper names never occur with a definite article. Consider, for example, the following facts from German:

(i) a. [Der Karl] hat mich gesehen   (argumental use of *der Karl*)
     The Karl has me seen
     'Karl saw me'
   b. (*Der) Karl, hast du den Peter gesehen?   (vocative use of *Karl*)
     (The) Karl, have you the Peter seen
     'Karl, have you seen Peter?'

On the basis of the facts, one might want to argue that –s in (41) and *te* in (42) is not an expletive D but rather a meaning-bearing element, possibly one related to the meaning property of exclamation. Further research is needed here.

[19] In present-day Dutch, there are certain contexts in which –s shows up after an infinitive. First of all, they are found in expressions like (i), which have an archaic/literary flavor:

(i) a. Zij was tot schreien-s bewogen
     She was to cry-s moved
     'She was moved so much that she had to cry'
   b. Ik heb die muziek tot vervelen-s toe moeten horen
     I have that music to bore-s PRT had-to hear
     'I had to listen to that music so often that I got bored with it'

Another context in which –s follows an infinitive is given by the following examples: *sterven-s-benauwd* (die$_{inf}$-s sultry; 'very stuffy'), barsten-s-vol (burst$_{inf}$-s-full; 'very full'. The infinitive has a degree meaning in these examples; *sterven-s-benauwd*, for example, has the meaning: 'so stuffy that one might die'. Interestingly, this –s also shows up after certain nouns that designate a degree and modify a gradable adjective: e.g. *dood-s bang* (death-s afraid, 'very afraid'), *hond-s brutaal* (dog-s impudent; 'very impudent'), *bliksem-s goed* (thunder-s good; 'very well'), *mieter-s lastig* (damned-s difficult; 'very difficult'), *deksel-s mooi* (deuced-s beautiful; 'very beautiful'), *drommel-s heet* (deuced-s hot; 'very hot'), *duivel-s aardig* (devil-s kind; 'very kind'). In Corver (2004), these expressions are analyzed as adjectival phrases in which predicate inversion has applied triggering the appearance of a nominal copula –s. The modifying degree word (a predicate) is moved across the subject of the predication relationship (i.e. the gradable adjective), yielding the inverted order (see also Corver 2000). Schematically:

(i) [$_{FP}$ duivel$_j$ [$_F$ F (= -s) +X$_i$ [$_{XP}$ aardig [$_{X'}$ t$_i$ [$_{AP}$ t]$_j$]]]]
      devil   –s   kind   ('very kind')

From the current perspective, according to which –s is more of a definite article-like element, these adjectival expressions may be reinterpreted as follows: -s starts out as a small clause head and undergoes head movement to the functional head Deg, into whose Spec the displaced predicate has moved via Predicate Fronting (i.e. predicate movement of the A-bar type). Schematically:

(ii) [$_{DegP}$ duivel$_j$ [$_{Deg'}$ X$_i$ (= -s)+Deg [$_{XP}$ aardig [$_{X'}$ t$_i$ [$_{AP}$ t]$_j$]]]]

It should, finally, be noted that –s does not always appear on the degree designating metaphorical noun: *steen(*-s)koud* (stone(-s)cold; 'stone-cold'), *dood(*-s)kalm* (death(*-s)calm, 'quite calm'), *lijk(*-s)bleek* (corpse(*-s)white, 'deadly pale').

(43) a. na [**het** eten]   (Standard Dutch)
        after the eat-inf; 'after dinner'
     b. voor [**het** melken]
        before the milk-inf; 'before 'the milking of the cows'

(44) a. noa eten**s**   (dialect of Groningen)
        after eat$_{inf}$-s
     b. veur melken**s**; 'after the milking of the cows'
        before milk$_{inf}$-s

In view of the above phenomena, there seems to be a sufficient empirical basis for concluding that the bound morpheme –*s* is a definite article-like element. We further saw that in some of the structural contexts, -*s* behaved more like an expletive article; i.e. it does not 'add' referentiality to the noun phrase. In those contexts, its main role is that of relating a substantive lexical item (e.g. the proper name) to the functional D-position. The relational nature of –*s* and its 'semantic emptiness' (in certain environments) makes it a good candidate for playing a role which is similar to that of the spurious indefinite article *een*. The (other) relational role would be that, just like spurious *een*, it functions as an intermediary element (i.e. a small clause head) between a subject and a predicate. Its semantic emptiness is also a property which is shared by spurious *een*. This element, for example, can appear in a noun phrase like *die etter van een Jan* (that jerk of a Jan), where it clearly adds no indefinite meaning at all.

4.3 Towards an analysis of –s prolepsis
Under the assumption that –*s* is a spurious (bound morphemic) definite article heading a small clause XP in the absolute genitival construction, can we account for the anticipatory occurrence of –*s* in absolute constructions (i.e. –*s* prolepsis) and for the phenomenon of –*s*-duplication? Our starting point is the small clause representation in (29a), repeated here, in which –*s* instantiates the X-head.

(29) a. [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s] [$_{AP}$ bloot]]]

The inverted order in which the adjectival predicate *bloot* precedes the subject *hoofd* is obtained by moving the former element across the latter to a higher position, say Spec,FP. The –*s* that intervenes between the inverted adjectival predicate and the small clause subject may be the result of head movement of the small clause head –*s* to the higher head F in whose Spec the adjective *bloot* has landed. Notice now that under a trace theory of movement, the duplication of –*s*, as in *blootshoofds*, is not accounted for under this analysis. This is clear from (45). The pattern we derive is *blootshoofd*.

(45)   [$_{FP}$ bloot$_j$ [$_{F'}$ -s$_i$+F [$_{XP}$ hoofd [$_{X'}$ t$_i$ t$_j$]]]]

Notice now that under a copy theory of movement, the duplication of –*s* follows directly: the –*s* that follows the small clause subject *hoofd* is a copy of the moved small clause head –*s* (see (46a)). Thus, both the head of the chain and the foot of the chain are phonetically realized. The inverted order, with the adjective preceding the noun is derived by predicate movement, which, under a copy theory of movement, also leaves behind a copy. In this case of

movement, only the copy that forms the head of the chain is phonetically realized. The copy that constitutes the foot of the chain must be deleted in the phonological component, given the impossibility of the sequence *blootshoofdsbloot*. This is depicted in (46b).

(46) a. [$_{FP}$ –s^i [$_{XP}$ hoofd [$_{X'}$ –s^i bloot]]] (head movt. of –s, creating chain (-s,-s))
    b. [$_{FP}$ bloot^j [$_{F'}$ s^i+F [$_{XP}$ hoofd [$_{X'}$ –s^i ~~bloot^j~~]]]] (pred. displ. + chain reduction)

A question which obviously arises is the following: Why can the two chain links be phonetically realized in the case of the small clause head *–s* but not in the case of the inverted predicate *bloot*? Or to put it differently, why is it possible for *–s* to be pronounced twice, but not for *bloot*? My answer to this question is based on the theory of linearization of chains as proposed by Nunes (1995, 2004).

Nunes' proposal about the linearization of chains builds on Kayne's (1994) Linear Correspondence Axiom (LCA), which states that a lexical item A precedes a lexical item B iff A (or a phrase containing A) asymmetrically c-commands B. Thus, the hierarchical position of a lexical item in a syntactic structure determines its linear order with respect to other lexical items in that structure. Thus, in a structure like (47), *Mary* in Spec,IP precedes the verb *kissed* and the noun *John*, since *Mary* asymmetrically c-commands those lexical items.

(47) [$_{IP}$ Mary [$_{I'}$ I [$_{VP}$ kissed [John]]]]

Consider next the passive construction in (48), where we have two copies of *John*. One copy (the head of the chain) is in Spec,IP and the other (the foot of the chain) occupies the direct object position.

(48) [$_{IP}$ John^i [$_{I'}$ was [$_{VP}$ kissed John^i]]]

Under the assumption that the links of a chain count as nondistinct for purposes of linearization, we face a problem for linearization. Consider, for example, the relationship between the two copies of *John* and the verb *was*: The upper copy in Spec,IP asymmetrically c-commands *was* and should be linearized as <John,was> according to the LCA. The verb *was*, however, asymmetrically c-commands the lower copy of *John*, which yields the linear order <was John>. This gives us an unwanted and impossible situation: the verb *was* is required both to precede and and to be preceded by a single lexical element, viz. *John*. As Nunes notes, the structure in (48) poses another problem for linearization: the higher copy of *John* c-commands the lower copy, which — given that the two copies are nondistinct — would amount to saying that *John* should precede itself. In short, a syntactic structure containing a chain consisting of more than one copy yields a problem for linearization. The structure cannot surface (i.e. be pronounced). The only way to 'rescue' the structure is to delete a chain link in the phonological component, e.g. the lower copy in (48). After deletion of the lower copy by means of the operation *Chain Reduction*, the structure can be linearized in accordance with the LCA.[20]

Turning again to the pattern *blootshoofds* and particularly to the representation (46b), we now have an account for the deletion of the lower copy of *bloot*. It must be deleted in order to obtain a structure that can be linearized in consonance with Kayne's (1994) LCA. If

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[20] In Nunes (2004:27), Chain Reduction is defined as follows: "Delete the minimal number of constituents of a nontrivial chain CH that suffices for CH to be mapped into a linear order in accordance with the LCA."

the lower copy is not deleted, we have a 'conflict' in the ordering of *bloot* and *hoofd*: given that the two instances of *bloot* are nondistinct, *hoofd* is required to precede and be preceded by the same element, viz. *bloot*.

Let us turn next to the phenomenon of –*s* duplication in (46). If the two occurrences of –*s* are copies of a single lexical item, the question arises as to why the two chain links can surface in this case. Nunes' theory about linearization also provides an answer to this question. He argues that phonetic realization of multiple copies is found in structural contexts in which one of the copies has become part of a complex word as a result of morphological fusion, an operation that applies in the Morphological component (i.e. before the structure is interpreted phonologically). Under the assumption that the LCA is not operative at the word-internal level, the copy that has been fused with another lexical item into a complex word, is no longer visible for the LCA. Consequently, no conflicting linearizations of the chain links arise.

One of the duplication phenomena Nunes discusses to illustrate how morphological restructuring exempts copies from being deleted via Chain Reduction is duplication of wh-words in long distance wh-movement constructions. Consider the following example from a German dialect:

(49) *Wen* glaubt Hans *wen* Jakob gesehen hat   (German: McDaniel 1986)
　　 Whom thinks Hans whom Jakob seen has
　　 'Who does Hans think Jakob saw?'

Nunes assumes that the wh-word has moved successive cyclically to the matrix Spec,CP via intermediate head adjunction of *wen* to C. As depicted in (50a), wh-movement yields a wh-chain consisting of three copies of the lexical item *wen*. As shown by (50b), only the two higher copies (i.e. the proleptic occurrences of *wen*) can be realized phonetically; the copy in the base position (i.e. the tail of the chain) must be deleted. Nunes points out that the lowest copy must be deleted (through Chain Reduction), since it is c-commanded by the highest copy of the chain. If the lowest copy remained, the structure would not be able to linearize because of the LCA. We would, for example, have a conflicting linear ordering between *wen* and *Jakob*: the highest copy would precede *Jakob* whereas the lowest one would precede it. Under the assumption that the wh-copies are non-distinct, we would have a conflict in linearization. Deletion of the copy in the tail position via Chain Reduction is required for the structure to linearize in accordance with the LCA.[21]

(50) a. [$_{CP}$ wen^i [$_{C'}$ glaubt Hans [$_{CP}$ [$_C$ wen^i [C]] [Jakob wen^i gesehen hat]]]] Copying
　　 b. [$_{CP}$ wen^i [$_{C'}$ glaubt Hans [$_{CP}$ #wen^i+C# [Jakob wen^i gesehen hat]]]]   Fusion
　　 c. [$_{CP}$ wen^i [$_{C'}$ glaubt Hans [$_{CP}$ #wen^i+C# [Jakob ~~wen^i~~ gesehen hat]]]]   Chain reduction

Consider next the wh-duplication phenomenon: i.e. the phonetic realization of the two 'proleptic' wh-elements. Why is it possible to have two phonetic realizations in this case? Nunes' answer is that the intermediate copy becomes invisible to the LCA after morphological fusion of the intermediate *wen* and the C has taken place. Morphology

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[21] The presence of a single wh-element in the long distance wh-movement example in (1) receives a straightforward account now. Under the assumption that successive cyclic movement goes through [Spec,CP] in (standard) English, the upper wh-copy (i.e. the one in the spec-position of the matrix CP) has c-command over the wh-copy in the spec-position of the embedded CP and the wh-copy in the base position. In order for the structure to linearize, the two lower copies must be deleted by Chain Reduction.

converts the adjunction structure [$_C$ *wen* [$_C$ C]] into a single terminal element (as represented by "#…#"), and, as a result of that, *wen* is no longer visible to the LCA. Consequently, *wen* need not be deleted for the structure to linearize.

Let's turn now to phenomenon of -*s* duplication in the absolute 'genitival' pattern *blootshoofds*. How can this phonetic realization of multiple –*s*-copies be accounted for? A way to go would be the following: After the small clause head X (i.e. –*s*) has been raised and adjoined to F, the adjunction structure [$_F$ –s [$_F$ F]] undergoes fusion in the Morphological component and turns into a single lexical item #[$_F$ –s [$_F$ F]]#. As a result of this morphological restructuring, the proleptic –*s* (i.e. the higher copy) is no longer visible to the LCA, which means that the whole structure can be linearized: the higher copy -*s* does not "see" the lower copy –*s*. Schematically:

(51) [$_{FP}$ bloot^j [$_{F'}$ #[$_F$-s^i [$_F$ F]]# [$_{XP}$ hoofd [$_{X'}$ –s^i ~~bloot^j~~]]]]

Having provided an account of the duplication pattern, let us now turn to the variants of the absolute genitival construction in which only a single element –*s* is found, as in *blootshoofd* and *bloothoofds*. Let's start our discussion with the first pattern.

I propose that this pattern is derived along the same lines as the duplication pattern *blootshoofds*, with the only difference that morphological fusion of the displaced (i.e. proleptic) –*s* and the functional head F does not take place. Schematically:

(52) a.   [$_{XP}$ hoofd [$_{X'}$ [$_X$ –s] bloot]]   (small clause configuration)
    b.   [$_{FP}$ –s^i [$_{XP}$ hoofd [$_{X'}$ –s^i bloot]]]   (move –s, creating chain {-s^i,-s^i})
    c.   [$_{FP}$ bloot^j [$_{F'}$ [$_F$ –s^i [F]] [$_{XP}$ hoofd [$_{X'}$ ~~–s^i~~ ~~bloot^j~~]]]] (pred. displ. + chain reduction)

So, the adjunction structure is not converted into a single terminal element. As a result of that, the displaced –*s*-copy has c-command over the –*s*-copy that constitutes the tail of the chain. In order to circumvent a violation of the LCA, the lower copy must be deleted through Chain Reduction.

Consider next the pattern *bloothoofds*, which has the –*s* only at the end of the absolute expression. One way to analyze this structure would be to say that, just like in the other absolute genitival variants, two displacement operations are involved: (i) movement of the small clause head –*s* to F and (ii) movement of the adjectival predicate to Spec,FP. The latter movement yields the chain {bloot^j, bloot^j}, the lower copy of which (the tail link) would be deleted via Chain Reduction. Head movement of –*s* yields the chain {-s^i, -s^i}. If morphological restructuring of the adjunction structure [$_F$ -s [F]] does not take place, deletion of one of the –*s*-copies must take place in order for the structure to linearize. For the pattern *bloothoofds* this would imply that the upper copy (the head of the chain) is deleted by Chain Reduction. The lower copy (i.e. the tail of the chain) is pronounced. Schematically:

(53) [$_{FP}$ bloot^j [$_{F'}$ [$_F$ ~~-s^i~~ [F]] [$_{XP}$ hoofd [$_{X'}$ -s^i ~~bloot^j~~]]]]

In recent years, the idea that lower copy pronunciation is possible in natural language has been proposed by various authors on the basis of a variety of phenomena (see among others Pesetsky 1997, Bošković 2001, Bobaljik 2002; see also Bošković and Nunes (this volume)). According to these proposals, pronunciation of the head of the chain sometimes causes problems in the phonological component. More specifically, pronouncing the higher copy

would lead to a violation of some PF-requirement. In those cases, pronunciation of the tail of the chain is necessary to obtain a legitimate PF-representation.

A nice illustration of this syntax-phonology interaction comes from Bošković's (2002) discussion of multiple wh-fronting in Romanian. As pointed out in (54a), Romanian is a multiple wh-fronting language; hence the ill-formedness of the wh-in situ in (54b). As shown by the pair in (55), a wh-element may remain in situ, if it is homophonous with the first displaced wh-element. Rather than interpreting (55b) as an exception to multiple wh-fronting in Romanian syntax, Bošković argues that there is no syntactic difference between (54) and (55) as regards multiple wh-fronting; in both cases we have multiple wh-fronting. The difference relates to the phonological component: if the higher copy of the fronted object wh-phrase *ce* were phonetically realized, we would have a violation of a PF-requirement which rules out adjacent homophonous words. For this reason, the lower copy of the object *ce* is pronounced.[22]

(54) a. Cine ce precede?
        Who what precedes
    b. *Cine precede ce ?
        Who precedes what
        'Who precedes what?'

(55) a. *Ce ce precede?
        What what precedes
    b. Ce precede ce
        What precedes what
        'What precedes what?'

Returning to the absolute pattern *bloothoofds*, we should raise the question whether lower copy pronunciation might be due to some PF-requirement. What phonological reason could there be for not pronouncing the higher copy? At this point, remember that thus far I have given two analyses of the complex head $[_F -s [_F F]]$. First of all, it may be a complex syntactic head (i.e. a head with internal syntactic structure), to the effect that –*s* has c-command over the lower copy, which results into deletion of the lower -*s* copy, yielding the pattern *blootshoofd*. Secondly, the complex head $[_F -s [_F F]]$ may have undergone morphological restructuring (i.e. fusion: $\#[_F -s [_F F]]\#$) with the effect that the lower copy may be realized (as in *blootshoofds*). As regards the pronunciation of the two patterns, remember that *blootshoofd* is pronounced as [bloots][hoofd] rather than [bloot][shoofd], and *blootshoofds* is pronounced as [bloots][hoofds] rather than [bloot][shoofds]. In other words, the intervening –*s* phonologically attaches to the element to its immediate left, i.e. the left-adjacent element. In *blootshoofd* (cf. (52c)), the small clause head –*s*, which is adjoined to F by head movement, phonologically cliticizes onto the left adjacent adjective *bloot*. In *blootshoofds*, it arguably is the phonologically single word $\#[_F -s^i [_F F]]\#$ that phonologically cliticizes onto the left adjacent adjective *bloot*.

Starting from the idea that phonological cliticization requires string-adjacency, I will assume, following a suggestion by Jairo Nunes, that the deletion of the higher –*s* copy results from its

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[22] I refer to the reader to the article by Bošković and Nunes in this volume for elaborate discussion of other instances of lower copy pronunciation.

impossibility to phonologically cliticize onto the adjective. More specifically, suppose that the small clause head –s is able to either left-adjoin (56a) or right-adjoin (56b) to F.[23] Schematically:

(56) a. [$_{FP}$ bloot^j [$_{F'}$ [$_F$ s^i[F]] [$_{XP}$ hoofd [$_{X'}$ –s^i bloot^j]]]]
    b. [$_{FP}$ bloot^j [$_{F'}$ [[$_F$ F] s^i] [$_{XP}$ hoofd [$_{X'}$ –s^i bloot^j]]]]

The idea would be now that phonological cliticization of –s onto *bloot* is possible only in (56a), since the raised small clause head –s is adjacent to the head *bloot*. In this case, the higher copy –s survives (and the lower one gets deleted for reasons of linearization). So we get the pattern *blootshoofd*. Consider next (56b). In this structure, phonological cliticization of –s onto the adjective *bloot* is impossible, because *bloot* is not adjacent to the raised small clause head –s; the head F intervenes between *bloot* and –s. One way to 'rescue' this structure would be to delete the higher copy –s, in which case the lower copy –s can survive. Deletion of the lower copy of *bloot* (for reasons of linearization; see above) yields the surface pattern *bloothoofds*:

(57) [$_{FP}$ bloot^j [$_{F'}$ [[$_F$ F] s̶^{i}] [$_{XP}$ hoofd [$_{X'}$ –s^i b̶l̶o̶o̶t̶^{j}]]]]

Now that I have given an explanation for the various surface patterns of the absolute genivital construction, I would like to close off this section with some words about the triggers for the movement operations that take place in this construction type. Consider, first, the displaced adjectival predicate (*bloot*). An important characteristic of this constituent is that it must be a bare positive head (e.g. *erg blootshoofds; very bare-s-head-s; 'with a very bare head'). Under a Bare Phrase Structure theory (Chomsky 1995), the adjective has an ambiguous categorial status: it is both a head (minimal) and a phrase (maximal). Given this, the small clause head –s and the bare adjectival predicate stand in a mutual c-command relationship in their 'base structure' (see e.g. (52a)). According to the LCA, this means that no linear order can be established between the two constituents. A way to obtain a structure that yields a linearization between the –s and the bare adjective in (52a) is to move the adjective to a higher position.[24] This movement is adjectival predicate movement to Spec,FP. Notice that in this case the bare adjective behaves like a phrasal constituent. When it occupies Spec,FP *bloot* has asymmetric c-command over (the two instances of) –s. As for the trigger of –s movement: I will tentatively assume that predicate movement in this construction is of the A-bar type. If so, the movement of –s to the higher

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[23] See also the *N of N*-construction in (24), where the small clause head X gets right-adjoined to F.
[24] See Uriagereka (1998:220-221) for a similar account of the data in (i). In (ia), *atom* and *split* are in a mutual c-command relation. Consequently, no linear can be established. In (ib), the adjective *split* can be linearized with respect to the noun, since it is part of a larger AP; the noun asymmetrically c-commands the adjectival head. Uriagereka points out that (ia) can be rescued by moving *split* to a higher position from where it asymmetrically c-commands *atom*.

  (i) a. *an atom split
      b. an atom [split in three pieces]
      c. a split atom

  See Larson & Marusic (2004), though, for a discussion of adjectives that can occur postnominally without any modification in English.

functional head may be interpreted as a kind of Verb Second effect (see my discussion of the exclamative noun phrase in (32)).[25]

5. –s prolepsis and duplication in prepositional contexts

Having provided an analysis of –s prolepsis and –s duplication in absolute genitival expressions like *blootshoofds*, I will now discuss some further instances of this phenomenon. The first pattern can superficially be represented as "Preposition + -s + Noun + -s" and is exemplified in (58):[26]

(58) a. Hij praat binnensmonds
     He talks inside-s-mouth-s
     'He talks between his teeth'
  b. Jan gooide de bal *boven(s)arms*
     Jan threw the ball over(s)arms
      'Jan threw the ball overarms'
  c. We bleven *binnen(s)huis*
     We stayed in-s-house(s?)
     'We stayed indoors'
  d. We houden deze informatie *binnen(s)kamers*
     We keep this information in(s)house-s
     'We keep it a secret'
  e. Zij bleven *binnen(s)lands*
     They stayed inside-s-land
     'They stayed in the country/within the boundaries of the country
  f. Ik heb u daarvan *onder(s)hands* kennis gegeven
     I have you there-of under(s)hand-s acqaintance given
     'I have acquainted you with it in secret'

As noted by Royen (1948, part II, p. 97), the question arises as to whether the bound morpheme that intervenes between the preposition and the noun historically relates to a genitival determiner *des* or whether it is really a proleptic –s that anticipates the occurrence of the –s that follows the noun. Thus, is an expression like *binnensmonds* in (58a) derived from a structure like *binnen des monds* (inside the-GEN mouth-GEN) or is the intermediate –s a grammatical morpheme that anticipates the occurrence of another –s. Under the latter interpretation, -s is often characterized as an 'adverbial marker -s' in traditional Dutch grammars (cf. Royen (1948, part II, p. 99). Royen (p. 101) remarks that even though certain expressions of the type "P+-s+N+-s" may be historically related to patterns featuring genitival case, it is quite clear that not all patterns have that origin. More specifically, patterns in which –s — which used to be a masculine/neuter genitival case suffix — combines with what used to be feminine nouns cannot possibly be interpreted as featuring a genitival case suffix –s (e.g. *binnenskamers* (inside-s-room-s, 'in private'), *binnenstents* (inside-s-tent-s; 'inside one's tent'); cf. Royen, p. 102). In view of this, Royen concludes that from a synchronic perspective

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[25] If FP is PP in the absolute genitival constructions (see (14)), then the spurious definite article, which functions as the small clause head X), is adjoined to (an empty) P. At this point, it is interesting to observe that adjunction of definite articles into P is a more widespread phenomenon. See e.g. German *zum*, which may be obtained by head movement of the determiner *dem* to *zu*, followed by morphological restructuring: *zum*.
[26] As indicated in (58), the pattern without –s prolepsis is also fine. For reasons of space, I will restrict my discussion to the pattern featuring prolepsis.

–s is an adverbial element in an expression like *binnensmonds*. More specifically, the final –s is an adverbial marker and the intermediate –s is a proleptic (i.e. anticipatory) occurrence of this adverbial marker.[27]

Let us take a closer look at the structure of these prepositional 'genitival' patterns and let us try to find out what the exact nature of the two occurrences of –s in an expression like *binnensmonds* might be. The first thing I would like to point out is that these expressions often have near equivalents featuring a noun phrase introduced by a definite article. Compare, for example, the following minimal pairs:

(59) a. Zij verbleven ondergronds
       They stayed under-ground-s
    b. Zij verbleven onder de grond
       They stayed under the ground
       'They stayed underground'

(60) a. Jan kwam binnenstijds terug
       Jan came within-s-time-s back
    b. Jan kwam binnen de tijd terug
       Jan came within the time back
       'Jan returned before the set time'

This reminds us of our analysis of –s in so-called absolute genitival constructions like *blootshoofds*. The element –s was analyzed as a spurious definite article that heads a small clause structure. The definite article-like status of –s in the examples in (60) is suggested by the impossibility of patterns such as (61a) and (61b), in which the definite article *de* co-occurs with –s:

(61) a. *Zij verbleven [onder de gronds]
    b. *Jan kwam [binnen de tijds] terug

Another characteristic property of these constructions is that they can display a stress pattern that is also found in PPs consisting of a P and a noun phrase complement: stress falls on the noun.[28] This is exemplified in (62) and (63):

(62) a. boven de HAND
       above the hand

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[27] In Dutch traditional grammar, the element –s is called an adverbial marker in examples such as (i) and (ii):

 (i) A: Vind je het mooi?   B: Zeker*s*!   (colloquial speech)
     A: Consider you it pretty   B: certain-s
     'Do you like it?'   B: Certainly!

 (ii) Jan spreekt zachtjes
      Jan speaks soft-DIM-s
      'Jan speaks softly'

[28] Dutch dictionaries indicate that patterns like *binnensmonds* permit two ways of pronunciation as regards stress: (i) BINNENsmonds and (ii) binnensMONDs. The latter stress pattern is similar to that of syntactic phrases, the former stress pattern is the one found in compounds (see discussion in the main text). See also note 3.

      b. bovenHANDs   (phrasal stress pattern)

(63) a. Onder de GROND
       under the ground
      b. OnderGRONDs   (phrasal stress pattern)

In this respect, the patterns (62b) and (63b) crucially differ from superficially similar expressions like *bovenhand* and *ondergrond* in (64) and (65), respectively. Here, we have the stress pattern that is typically found with Dutch compounds. That is, (word) stress typically falls on the left member of the composite noun.

(64) de BOVENhand hebben over iets   (compound stress pattern)
     the upper-hand have over something
     'to have the upper hand over something'

(65) de ONDERgrond   (compound stress pattern)
     the underground/subsoil

From the stress pattern in (62b)-(63b), we may conclude that linguistic expressions such as *binnensmonds*, *bovenhands*, *et cetera* can be phrasal expressions (i.e. XPs).

     The next question to be answered is: What is their internal syntax? If we follow our analysis of the absolute genitival expression *blootshoofds*, we might hypothesize that *binnensmonds* involves head movement of a small clause head *–s* and displacement of a predicative XP. One possible implementation of such an analysis might start from a structure like (66a), in which *mond* is the subject of the predication relationship and the (intranstive) preposition *binnen* the predicate.[29] The surface order would be derived by head movement of *–s* (66b) and subsequent predicate movement of the PP *binnen* to Spec,FP (66c). The two copies of the chain $\{-s^i, -s^i\}$ are able to survive at PF. The lower copy of *binnen*, however, has to be deleted for reasons of linearization (i.e. in order to circumvent a violation of the LCA).

(66) a. $[_{XP}$ mond $[_{X'}$ $[_X$ –s$]$ binnen$]]$
     b. $[_{FP}$ $[-s^i+F]$ $[_{XP}$ mond $[_{X'}$ –s^i binnen$]]]$
     c. $[_{FP}$ binnen^j $[_{F'}$ $[-s^i+F]$ $[_{XP}$ mond $[_{X'}$ –s^i ~~binnen~~^{j}$]]]]$

Although this analysis may give the right surface outcome, there is a good reason for rejecting it. The proposed predication relationship does not give us the right interpretation: an expression like *binnensmonds* in (58a) does not mean: '(He talks with) the mouth inside'. Or take *binnen(s)huis* in (58c). It does not have the meaning: 'with the house inside'. It rather means something like: 'inside the house'.

     Is there an alternative analysis combining predicate displacement and head movement of *–s* that captures the right meaning? I would like to propose that the expressions in (58) involve a possessive relationship. *Binnensmonds* in (58a), for example means: 'inside his mouth'. In this case, the clausal subject determines the way the empty possessor — which for the sake of analysis I will simply consider to be a *pro* — is interpreted. The phrase *binnenshuis* in (58c) has the interpretation: 'inside our house' or 'inside someone's house

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[29] The preposition *binnen* can be used intransitively, as in: *Marie is binnen* (Mary is inside; 'Mary is inside the house'). See Van Riemsdijk (1978).

(e.g. the host's house)'. In this case, the reference of pro is determined by the clausal subject *we* or its reference is arbitrary (i.e. 'inside someone's house').

I will assume that the possessive relationship is configurationally defined in terms of the small clause structure in (67a), which informally reads as: "mouth (is) to+Possessor". In other words, the possessed noun is the subject of the predication relationship and the empty possessor (POS) is the predicate.[30]

(67) a. [$_{XP}$ mond [$_{X'}$ [$_{X}$-s] POS]] (i.e. "mouth is [to POS]")
   b. [$_{FP}$ F [$_{XP}$ mond [$_{X'}$ [$_{X}$-s] POS]]]
   c. [$_{FP}$ [-s^i+F] [$_{XP}$ mond [$_{X'}$ –s^i POS]]]
   d. [$_{FP}$ POS^j [$_{F'}$ [-s^i+F] [$_{XP}$ mond [$_{X'}$ –s^i POS^j]]]]
   e. [$_{PP}$ binnen [$_{FP}$ POS^j [$_{F'}$ [-s^i+F] [$_{XP}$ mond [$_{X'}$ –s^i POS^j]]]]]

The phenomena of –*s* prolepsis and –*s* duplication as found in this construction type are the result of movement and copying. The small clause head –*s* undergoes movement to a higher functional head F and leaves behind a copy. After morphological restructuring has applied to the adjunction structure [$_F$ –s [$_F$ F]], yielding #[$_F$ –s [$_F$ F]]#, the lower copy –*s* is no longer c-commanded by the upper copy –*s*. The two copies can now be realized phonetically without resulting into a violation of LCA.[31]

6. -s Prolepsis and duplication in 'adverbial expressions'
In this section I will discuss a few other expressions from Dutch displaying the phenomenon of –*s* prolepsis. These expressions are typically used adverbially. A first example is given in (68):

(68) a. in**s**gelijk**s**   (present-day Dutch)
      in-s-similarity-s
      'likewise/in the same way'
   b. U wenst het en ik *insgelijks*
      You wishes it and I in-s-similarity-s
      'You wish it and wish it too'

The expression *insgelijks* superficially consists of the following elements: P + -s + N + -s. The question arises as to how to interpret the two occurrences of –*s*. Can this pattern of –*s* prolepsis (and -*s*-duplication be analyzed along the same lines as the one we found in absolute genitival expressions like *blootshoofds* and prepositional patterns like *binnensmonds*? That is, can –*s* in (68a) be interpreted as a definite article-like element that functions as a small clause head which undergoes head movement (and copying)? Or should a different analysis be assigned to this pattern of –*s* prolepsis and duplication? As will become clear, I will take the latter route.

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[30] This analysis is reminiscent of Den Dikken's analysis of possessive constructions like *Jacobs zonen* (see (26b)). In (67), I abstract away from the presence of a dative P.
[31] The phrase *binnensmonds* is (slowly) pronounced as [binnens][monds] (and not: [binnen] [smonds]). Thus, the proleptic –*s* phonologically attaches to the lexical element to its left. Remember from the previous section that I proposed that phonological attachment of –*s* to a preceding host was only possible if the two elements were adjacent. In (56b), for example, -*s* and *bloot* are not adjacent (due to the intervening head F) and, consequently, phonological cliticization of -*s* onto *bloot* was impossible. Given this approach, one might wonder why phonological cliticization is not blocked in (67e). Since POS (i.e. pro) intervenes, one might think that –*s* (or maybe better: #[-s^i+F]#) is unable to cliticize onto *binnen*. I will tentatively assume that, by sitting in a Spec position, POS does not count as an intervening head for purposes of adjacency.

Let us start our analysis by pointing out that the expression *insgelijks* has become a fixed, unanalyzed word for present-day speakers of Dutch. Historically, however, it relates to the forms in (69) and (70) from Middle Dutch, which, as a matter of fact, also had the variant *insgelycs*:

(69) in gelike des   (Middle Dutch)
     in similarity that-GEN; 'likewise/in the same way'

(70) in des gelike
     in that-GEN similarity; 'likewise/in the same way'

(69) and (70) are PPs headed by *in*. The complement noun phrase is headed by *gelike*, which combines with the genitival element *des*. Middle Dutch *des* is a weak/clitic genitival form of the demonstrative pronoun 'dat'/'die' (that$_{neuter/masc}$) and has the meaning: 'of that'. The full genitival form of the demonstrative pronoun (masculine/neuter) is: *dies*. Observe that (69) and (70) differ from each other in the placement of the genitival demonstrative: in (69) it follows the head noun, whereas in (70) it precedes the head noun. Given the fact that in Middle Dutch complements generally follow the head noun, I will assume that the order in (70) is a derived order obtained by movement of *des* to some noun phrase-internal functional projection. Schematically:

(71)   in [$_{FP}$ des^i [$_{F'}$ F [$_{NP}$ gelike ~~des^i~~]]]

Under a copy theory of movement, movement of *des* leaves behind a copy in the 'trace' position. As indicated in (71), this lower copy is deleted in a string like (70). Following Nunes' theory of chain realization, I will assume that the lower copy is deleted in order to circumvent a violation of the LCA.
     What is interesting is that we also find the pattern *desgelijks*; i.e. *des* + *gelijk* + *-s* (Middle Dutch: desgelikes)

(72) **des**gelijk**s**
     that-GEN-similarity$_{Noun}$-s
     'likewise/in the same way'

What I would like to propose now is that in older variants of Dutch this pattern was derived by leftward movement of the weak demonstrative pronoun *des*, as in (73a). As a next step in the derivation, the lower copy of *des* and the adjacent noun undergo morphological restructuring (73b). This morphological restructing results into a further reduction of the weak pronoun *des* to –*s*. After morphological restructuring, the lower copy is no longer visible for the upper copy. Both copies can be realized phonetically without violating the LCA.

(73) a. [$_{FP}$ des^i [$_{F'}$ F [$_{NP}$ gelijk des^i]]]   (copying)
     b. [$_{FP}$ des^i [$_{F'}$ F [$_{NP}$ #[$_N$ gelijk+-s^i]#]]] (fusion and phonological reduction of *des* into –*s*)

I propose that this analysis was also at the basis of the formation of expressions such as those in (74a) and (75a), which in present-day Dutch are no longer felt to be composite words:

(74) a. **des**ondank**s**
     that.GEN-spite$_{Noun}$-s
     'in spite of that'

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b. des$_2$ ondank des$_1$ → des [ondank+des] → [desondanks]

(75) a. **des**nood**s**
     that.GEN-need$_{Noun}$-s
     'if necessary'
   b. des$_2$ nood des$_1$ → des [nood+des] → [desnoods]

Getting back to the pattern *insgelijks*, we may plausibly assume that in this pattern the displaced demonstrative *des* has also undergone phonological reduction to –*s*. The following derivation may have been at the basis of this pattern: First, the weak demonstrative pronoun *des* undergoes movement from the complement position to *gelijk* to a higher functional position. Suppose now that this position is not Spec,FP (cf. (73)) but a position adjoined to F, as in (76a). Under the assumption that the lower copy *des* cliticizes onto the noun, we get the representation in (76b). Morphological restructuring givens us the final representation in (76c).

(76) a..in [$_{FP}$ [$_F$ des$_2$+F] [$_{NP}$ gelijk des$_1$]]   (copying + adjunction to F)
     b. in [$_{FP}$ [$_F$ des$_2$+F] [$_{NP}$ gelijk+des$_1$]]   (cliticization of lower copy to N)
     c. in [$_{FP}$ #[$_F$ -s+F]# [$_{NP}$ #[$_N$ gelijk+-s]#]]   (fusion)

I now turn to another remarkable instance of –*s* prolepsis, namely –*s* prolepsis in temporal expressions like those in (77):

(77) a. [**'s** Zondag**s**] ga ik naar huis
        -s Sunday-s go I to home
        'This sunday I go home'   ('des' = 'of this/that week')
     b. [**'s** Ochtend**s**] vertrok zij
        -s Morning-s left she
        'She left this morning'   ('des' = 'of this/that day')

Here, too, we have an expression featuring two occurrences of –*s*. Interestingly, we also find temporal expressions such as those in (78):

(78) a. [***Des zondags***] reed de familie gezamenlijk per wagen naar de kerk (Royen 1948:354)
        That.gen sunday-s drove the family together by car to the church
        'That sunday, the family drove to church together'
     b. [***Des ochtends***] was het vliegtuig uit Bulawayo vertrokken
        That.gen morning-s had the plane from Bulawayo left
        'That morning the plane had departed from Bulawayo'

I would like to propose now that an expression like *des zondags* has the meaning: '(at) the sunday of-that'. *Des* (i.e. of-that) refers to a (situationally given/presupposed) time period (e.g. 'this week'). Thus, *des zondags* in (78a) means 'the sunday of this/that week', and *des ochtends* in (78b) means 'the morning of this/that day'.

   A pattern like *des zondags* can now be derived as follows : *des* is moved from its complement position to a position to the left of the head noun (say: Spec,FP) and leaves behind a copy (cf. (79)). The lower copy cliticizes onto the head noun, yielding the representation in (79b). Morphological restructuring yields the pattern in (79c):

(79) a. [FP des$_2$ [F' F [NP zondag des$_1$]]]   (copying)
      b. [FP des$_2$ [F' F [NP [N zondag+des$_1$]]]]   (cliticization)
      c. [FP des$_2$ [F' F [NP #[N zondag+-s$_1$]#]]]   (fusion : zondag+des = zondag-s)

Consider next the derivation of an expression like *'s zondags* in (77a). I will assume that in this pattern, *des* is not moved to Spec,FP but rather adjoins to the head F, yielding the representation in (80a). The lower copy of *des* gets cliticized onto the noun. Morphological restructuring gives us the representation in (80c):

(80) a. [FP [F des$_2$+F] [NP zondag des$_1$]]   (copying + adjunction to F)
      b. [FP [des$_2$+F] [NP [N zondag+des$_1$]]]]   (cliticization to N)
      c. [FP [#des$_2$+F# [NP #[N zondag+des$_1$]#]]]   (fusion : des+F zondag+des = -s *zondag -s*)

Thus far, I have argued that expressions such as *desnoods*, *desondanks*, *desgelijks* and *des zondags* are derived by leftward movement of a weak demonstrative pronoun *des* and cliticization and morphological restructuring of the copy that constitutes the tail of the chain. I would like to close off this section with a brief discussion of a very similar phenomenon in the prepositional domain in certain dialects of German.

Consider the following examples from German dialects (see Oppenrieder 1990, Fleischer 2002):

(81) a. [**Da da**mit] will ich übrigens nichts zu tun haben
          that that-with want I by-the-way nothing to do have
          'I don't want to be involved in that.'
      b. [**Dodr**one] denkt er nicht   (Schlesisches Wörterbuch I:179)
          there-there-of thinks he not
          'He does not think of that.'

In these examples, we find a doubling of the pronominal element that is selected by the preposition. In standard German, we have a single pronoun, e.g. *damit* (that-with; 'with that/with it'). As has been shown by Van Riemsdijk (1978) for the Dutch equivalent of *damit*, viz. *daarmee*, the pronoun originates as a right branch complement of the preposition and undergoes leftward movement to [Spec,PP]. In Dutch, the demonstrative pronoun *dat* converts into *daar* when it occupies this specifier position; see (82).

(82) a. *Jan rekende [op dat]
          Jan counted on that
      b. Jan rekende [daarop]
          Jan counted there-on
          'Jan counted on that.'

This PP-internal movement of the demonstrative pronoun is schematically represented in (83a). This movement operation has been reinterpreted by Zwarts (1992) as an operation shifting the demonstrative pronoun to the spec-position of a functional head within the extended prepositional projection (see (83b)):

(83) a. [PP daar$_i$ [P' op t$_i$]]   (Van Riemsdijk 1978)
      b. [RP daar$_i$ [R' R [PP op t$_i$]]]   (Zwarts 1992)

Under a copy theory of movement, leftward movement of *daar* leaves behind a copy: Schematically:

(84)   [$_{RP}$ daar^i [$_{R'}$ R [$_{PP}$ op ~~daar^i~~]]]

As indicated, the lower copy *daar* must be deleted; otherwise the structure cannot be linearized in consonance with the LCA.

   Consider now again the PP-internal doubling patterns in (81). I propose that, just like in the derivation of expressions like *desnoods* and *des zondags*, a demonstrative element is moved leftward across its selecting lexical head and leaves behind a copy that, for purposes of linearization, undergoes morphological restructuring with the preposition. In (85), the derivation of the sequence *da damit* is given:

(85) a.   [$_{RP}$ [$_{R'}$ [R [$_{PP}$ [$_P$ mit] da]]]]]
     b.   [$_{RP}$ da^i [$_{R'}$ [R [$_{PP}$ [$_P$ mit] da^i]]]]]   (movement of *da* to Spec,PP plus copying)
     c.   [$_{RP}$ da^i [$_{R'}$ [R [$_{PP}$ #[$_P$ da^i+ mit]#]   (morphological restructuring)

In (85b), the demonstrative *da* is moved to Spec,RP, which is an instance of phrasal (i.e. DP) movement. A copy of *da* is left behind in the 'trace position'. In (85c), *mit* and the *da*-copy in the complement position undergo morphological restructuring. After morphological restructuring, the lower copy has become invisible for the upper copy. Both instances of *da* can be phonetically realized. The word order *da+mit* (rather than *mit+da*) of the complex preposition in (85c) should be understood as a reflex of fusion.

7. Conclusion
In this article, I have investigated the phenomenon of *–s* prolepsis in Dutch, i.e. the anticipatory occurrence of the bound morpheme *–s* in linguistic expressions such as *blootshoofds* (an absolute genitival construction), *binnensmonds* (a PP-like construction), *insgelijks* and *'s zondags* (adverbial expressions). An interesting property of these constructions is that they feature two instances of the bound morpheme *–s*. I argued that this duplication phenomenon should be analyzed in terms of movement and copying. In constructions like *blootshoofds* and *binnensmonds*, the element *–s* is a (spurious) definite article-like element that is the head of a small clause XP. This head is raised to a higher head in contexts of predicate displacement. In constructions like *insgelijks* and *'s zondags*, the bound morpheme *'s* is analyzed as a weak/reduced demonstrative pronoun that has been moved from the complement position of the noun to a position preceding the noun. In all four constructions, the leftmost *–s* is the proleptic (i.e. displaced) element. The *–s* that follows is the copy left behind after movement. The possibility of phonetically realizing the two copies was explained in terms of Nunes' theory about the linearization of chains. I hope to have shown that an intriguing phenomenon observed in Dutch traditional grammar may receive a new syntactic analysis by using the 'linguistic tools' (*in casu*: copy theory) made available by generative grammar.

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