Predication in nominal phrases

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Abstract. The main theoretical subject of this paper is the symmetry between nominal and verbal projections. It is demonstrated that predication exists in the nominal domain, in a way quite similar to predication in the clausal domain. An analysis of predication in a configurational way – such that the subject and the predicate together constitute a small clause – makes it possible to provide detailed analyses of complex nominal constructions involving predication, and predicate inversion in particular. This paper focusses on three construction types from Dutch: the N-VAN-EEN-N construction (EEN BEER VAN EEN KEREL ‘a bear of a guy’), the WAT-VOOR construction (WAT VOOR EEN KEREL ‘what kind of guy’), and the WAT-EEN exclamative (WAT EEN KEREL ‘what a guy’). Another aspect of symmetry concerns the fact that the nature of the functional projections in the nominal domain is not significantly different from that of functional projections in the clausal domain. For instance, it is argued that copular elements and complementisers are not peculiar to the clausal domain, but that these are found in the nominal domain as well.

1. Symmetry in predication and predicate movement

Predication is the foundation of language. It is ubiquitous – each and every clause contains some sort of predication; many feature more than one. But while nobody would ever contest the pivotal role played by subject-predicate relationships in the analysis of clauses, so far there have been very few attempts to extend predication into the realm of non-clausal constituents. Our particular focus in this paper will be the nominal phrase. We will identify a whole range of constructions which can be seen to involve predication within the confines of the nominal domain, the DP. The central claim of this paper will be that there is symmetry between clauses and nominals with regard to PREDICATION – predication is found within both clauses and nominal phrases. More specifically, we will argue that both in clauses and in nominal phrases there can be movement of predicates into positions to the left of their subjects. This, then, is another piece of symmetry between the clausal and nominal domains. And we will see that even with respect to the finer details of the workings of these leftward predicate movement processes, there is striking symmetry between clauses and nominals: in both, predicate movement can be
of two types (A and A'), and in both, the application of predicate movement goes hand in hand with the occurrence in the surface string of grammatical markers, like copular elements. Specifically:

- there is symmetry between clauses and nominals with regard to the occurrence of PREDICATION
- there is symmetry between clauses and nominals with regard to PREDICATE MOVEMENT — it occurs in both and can be of two types:
  - PREDICATE INVERSION (PM-A, i.e., predicate movement to an A-position)
    - cf. COPULAR INVERSION  *The best candidate is John*
  - LOCATIVE INVERSION  *Down the hill rolled the baby carriage*
  - PREDICATE FRONTING (PM-A', i.e., predicate movement to an A'-position)
    - cf. WH-MOVEMENT  *How good a candidate is John?*
    - TOPICALISATION  *Down the hill, the baby carriage rolled*
- there is symmetry between clauses and nominals with regard to the occurrence of grammatical markers (copular elements, etc.) introduced by predicate movement.

Let us illustrate the extent to which the clausal and nominal domains are symmetrical with respect to predication on the basis of a fairly exhaustive overview of the types of predication constructions that have both clausal and nominal incarnations, given in the table in (1). The examples are drawn from Dutch, as will most of our examples. Dutch is eminently fit to illustrate the parallelism between clauses and nominals because of its great versatility in predicate movement types within the nominals phrase.

(1)  *Parallels between clauses and nominals illustrated*

<table>
<thead>
<tr>
<th>Construction</th>
<th>Clause</th>
<th>Nominal</th>
</tr>
</thead>
</table>
| −PM A-movement | Die kerel is een beer  
*That guy is a bear* | een kerel als een beer  
a guy like a bear |
| +PM | De grootste beer is die kerel  
*The biggest bear is that guy* | een beer van een kerel  
a bear of a guy (N van een N) |
| −PM A'-movement | Die kerel is *wat/zo*  
*That guy is what/so* | een kerel als wat/zo  
a guy as what/so ('quite a N') |
| +PM | Wat is die kerel?  
*What is that guy* | wat voor een kerel?  
what for a guy (wat voor-WH) |
| +PM | Wat is dat een kerel!  
*What is that a guy* | wat een kerel!  
what a guy (wat-EXCL) |
| +PM | Zo is een kerel  
*So/thus is a guy* | zo'n kerel  
so-a guy (zo'n N) |
In all of the constructions listed in (1) there is a predicative relationship between the two major constituents. For the clausal examples this goes without saying. And for the *N van een N* construction – the Dutch variant of the *N of a N* construction (cf. *a hell of a problem*) – in the top righthand cell of the table, this is also pretty obviously the case: the *kerel* in our Dutch example *een beer van een kerel* is ascribed the property of being like a bear, just as in the ‘straight’, un inverted construction *een kerel als een beer* (cf. Quirk et al. 1985, p. 1284; Kayne 1994, p. 106). The two examples clearly differ on the surface, in ways to which we will return, but underlyingly they share the same predication structure, which we will express syntactically in terms of a small clause. That is, the structure of the *N₁ van een N₂* construction contains a small clause of which *N₁* is the predicate and *N₂* is the subject.

For the *wh*-movement and topicalisation constructions in the second row of (1), ‘straight’ subject-predicate counterparts can also be identified. These are all basically formed on the basis of a structure that is reflected by the first examples. For all cases, it is plausible to assume that the examples involving movement derive from a structure in which *wat* or *zo* functions as a small clause predicate. With respect to the nominal column, then, what we can say is that the structure of *wat voor, wat* exclamative and *zo’n N* constructions contains a small clause of which *wat/zo* is the predicate.

This will be the backbone of the analyses that we will outline in what follows: that all constructions listed in (1) feature a predication relationship, which is expressible in terms of a small clause structure. In this paper we will focus on three of the DP-internal predication constructions in the righthand column of the table, i.e., on the *N van een N, wat voor, and wat* exclamative constructions, leaving the *zo*-constructions out of consideration for reasons of space and saving their analysis for another occasion. We will present accounts for each of these three constructions, starting out with the *N van een N* construction.

### 2. The *N van een N* construction: Predicate Inversion

Let us start out from the hypothesis that a similar initial structure underlies the examples in (2).

\[(2)\]
\begin{align*}
\text{a.} & \quad \text{een beer van een vent} \\
& \quad \text{*a bear of a man*} \\
\text{b.} & \quad \text{een vent als een beer} \\
& \quad \text{*a man like a bear*}
\end{align*}

The derivation of (2b) on the basis of a small clause structure in which *een beer* is the predicate is relatively unproblematic. For (2a), on the other hand,
it is clear that we need recourse to some sort of reordering of subject and predicate to get the surface word order to fall out right. We would like to argue that the reordering in question is an instance of Predicate Inversion, similar to what happens in the English copular inversion constructions of the type in (3b).\(^1\)

(3) a. John is the best candidate
   b. The best candidate is John

Predicate Inversion is an instance of Move \(\alpha\) which, as its name suggests, inverts a predicate around its subject. Let us take the case of copular inversion (3) as our reference point. For copular constructions like these, Stowell (1981) has argued that they underlyingly feature a small clause (SC) in the complement of the copula be, a head triggering raising to subject position of a constituent contained within the small clause. Underlyingly, then, (3a,b) are analysed as in (4a), in which a functional projection (XP) is included in the structure of the nominal small clause. The difference between the two examples in (3) lies in the specific choice of the constituent moved to subject position: in (3a) the SC subject John is raised, as shown in (4b), while in (3b) it is the predicate nominal the best candidate that undergoes movement (see (4c)). Following especially Moro (1988, 1993, 1997), and also Hoekstra and Mulder (1990) and Heycock (1991, 1994), we assume that the inverted predicate nominal in (3b) targets the same position that the raised subject in (3a) lands in: SpecIP.

(4) a. \([\text{IP} \ldots \text{be} [\text{XP} \text{John} X [\text{Pred} \text{the best candidate}]]]\]
   b. \([\text{IP} \text{John}_i \ldots \text{be} [\text{XP} \text{t}_i X [\text{Pred} \text{the best candidate}]]]\]
   c. \([\text{IP} \text{the best candidate}_j \ldots \text{be} [\text{XP} \text{John} X [\text{Pred} \text{t}_j]]]\]

Thus, Predicate Inversion can be characterised as A-movement of a predicate to subject position, around the position occupied by the predicate’s subject. This result has two consequences, both of which help confirm our Predicate Inversion approach to the \(N\) van een \(N\) construction.

With Predicate Inversion being A-movement to a position c-commanding the subject, and with the inverted predicate being coindexed with its subject (by general subject-predicate coindexation), Principle C of the Binding Theory predicts that A’-extraction of the subject around its inverted predicate will be illegitimate: it will instantiate strong crossover, given that the variable left by subject extraction is inadvertently A-bound within the domain of its maximal chain by the coindexed predicate. This prediction is borne out, as Hoekstra and Mulder (1990) argue, by the ungrammaticality of (5):

\(^1\)cf. Zamparelli’s (1995) approach to a kind of \(N\) constructions, where kind is an inverted predicate.
(5)  *Which man do you consider the best candidate to be?

Now consider the fact that (6a), which involves extraction from the \textit{N van een N} construction, is totally ungrammatical, in contrast to (6b), which involves extraction from a nominal PP-complement:

(6)  a. *een huis \textit{waar} hij [een kast van \textit{t}] heeft gekocht  
a house\textit{where/which} he [a giant of] has bought

b. een huis \textit{waar} hij [een verdieping van \textit{t}] heeft gekocht  
a house\textit{where/which} he [a floor of] has bought

On a Predicate Inversion approach to (2a), the deviance of (6a) is of the same structural type as that of (5). Analyses which treat the \textit{van een N} sequence in \textit{N van een N} constructions on a par with the \textit{van een N} sequence in ‘ordinary’ DPs, such as \textit{een verdieping van een huis} (cf. e.g., Abney 1987; Everaert 1992; Napoli 1989) would leave the sharp contrast in (6) a mystery. The parallel between (5) and (6a) thus supports a Predicate Inversion approach to the syntax of the \textit{N van een N} construction.\(^2\)

A second consequence of the A-movement analysis of Predicate Inversion is that potential problems of locality are expected to arise in the derivation of Predicate Inversion constructions, given that the fronted predicate necessarily crosses an intervening A-position – the position of the SC subject.\(^3\) This would incur a violation of (Relativized) Minimality (Rizzi 1990) unless the position that the A-moving predicate (LP in (7)) skips and the first position that it can land in can be rendered \textit{equidistant} from its extraction site, in the sense of Chomsky (1993). Two positions are equidistant if they are members of the same minimal domain.

The way, then, in which the minimalist locality theory can be complied with in a Predicate Inversion construction like (3b) is to have the SC-head X undergo domain-extending head movement to a higher head, in particular, a head in whose specifier position the raised predicate lands (or makes an intermediate touch-down). We will identify this head as ‘F’ in the structure in (7) (cf. note 4).

\(^2\) There are other approaches to the \textit{N van een N} construction, not involving Predicate Inversion, that also manage to capture the deviance of (6a): Aarts’s (1994) account (see (23), below), for example, will assimilate (6a) to \textit{een huis dat ik een reusachtig t heb gekocht} ‘a house that I bought a gigantic \textit{t},’ a likewise ungrammatical example of extraction with stranding of an adjectival modifier. The ungrammaticality of (6a) hence does not unequivocally favour only the Predicate Inversion approach.

\(^3\) It is immaterial here whether SpecXP is the base position of the SC subject or a derived position.
In the structure in (7), moving the X-head up to F creates the requisite minimal domain that contains both SpecXP and the first available landing-site for the moved LP, SpecFP. The 'shortest movement' condition thus ensures that X will raise to F whenever LP moves across the filled specifier of the XP dominating it.

Since we treat the N van een N construction in terms of Predicate Inversion, the structure in (7) will form an integral subpart of the analysis of N van een N constructions. But clearly, as it stands, (7) is rather indeterminate; it gives rise to two important questions which the analysis will have to supply answers for:

- what is F?
- what is X?

We will address these questions in turn, starting with F.

3. The nominal copula

As Moro (1991) first noted (see also Heycock 1991; Frank 1992), there are contexts in which Predicate Inversion leads to the obligatory presence of a copular element in the surface string. Thus, while in (8a) the infinitival copula to be can freely be omitted, it cannot be left out in the Predicate Inversion counterpart of (8a) given in (8b):

\[(8) \quad \begin{array}{l}
\text{a. I consider John (to be) the best candidate} \\
\text{b. I consider the best candidate *(to be) John}
\end{array} \]

From the perspective of the analysis of Predicate Inversion outlined in the previous subsection, we can make sense of this dichotomy between (8a) and (8b) by saying that the copula be is the surface reflex of the presence of F in the structure in (7). Whenever Predicate Inversion takes place, F is necessarily included in the tree for purely structural reasons, having to do with the minimalist theory of locality; in non-inversion constructions, on the
other hand, there is nothing to force the presence of F. The distribution of the clausal copula *be* in (8) can thus be taken to be (at least in part) a reflex of structurally driven functional head movement of X to F, with *be* being the overt realisation of F.

When we now turn to the N van een N construction, exemplified by *een beer van een vent* ((2a)), we cannot fail to note the cogent parallels between it and the copular inversion construction in (8b). In both, Predicate Inversion obtains, and in both a perfectly meaningless element shows up, apparently for purely structural reasons only – *be* in (8b) and *van* in (2a). We will take these parallels to be real and claim that *van* in (2a) is the surface reflex of the presence of F in the structure of N van een N constructions (cf. Den Dikken 1995). The parallelism between (8b) and (2a) comes out very clearly in the structures in (9) and (10):

\[
\begin{align*}
(9) & \quad [I_P [F_P \text{the best candidate}] [F \{F(=be) + X_i\}] \\
& \quad [X_P \text{John} [X'_i t_i t_j]])] \\
(10) & \quad [D_P [F_P \text{beer}] [F \{F(=van) + X_i\} [X_P \text{vent} [X'_i t_i t_j]]]])
\end{align*}
\]

F is the home of copular elements like *be* and *van*. For our purposes here, this conclusion will have to suffice. We will leave the nature of F underdetermined.\(^4\) Future research will have to look into the precise function of the ‘nominal copula’ *van* in the N van een N construction.\(^5, 6\)

4. The spurious indefinite article

Like F, the head X in the structure in (7) has a crucial structural role to perform as well: it is the head that undergoes the requisite domain-extending movement operation that enables the small clause predicate to invert with its subject via A-movement. But unlike F, X is not present in the structure in Predicate Inversion constructions only; we will claim that X is a functional

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\(^4\) The node ‘F’ is an aspectual head in all likelihood; see Den Dikken (1995) for a discussion of this issue, which is tangential to our present concerns.

\(^5\) Zamparelli (1995) also fully assimilates *be* and *of* in his account of a kind of N constructions, mentioning that N of a N constructions are presumably similar in also featuring Predicate Inversion and copular *of*.

\(^6\) A different approach to the occurrence of *van* in the N van een N construction is that *van* is a nominal complementiser on a par with the occurrence of *van*/*of* in nominalisations and other nominal constructions, as proposed in Kayne (1994) and Hoekstra (1996). By adopting this view we would have to abandon the symmetry with verbal Predicate Inversion in part. Nominal Predicate Inversion would then involve movement to the specifier of the nominal complementiser, an A'-position, after A-movement to SpecFP. Although we will opt for the approach discussed in the main text, a choice for the nominal complementiser approach would not seriously undermine the present proposal.
head internal to the structure of small clauses. We will argue, particularly on the basis of a detailed examination of the distribution of the 'spurious' indefinite article *een*, that the small-clause-internal head X is the home of this spurious article and that X also harbours other 'linkers', like als 'like' in (2b) (cf. also Aarts 1992).

In the Dutch N van een N construction, there are several contexts in which the second noun (N₂) is preceded by a token of the indefinite article *een* which does not seem to 'belong to' that noun, nor in fact to the noun that precedes it. Normally, the indefinite article *een* is compatible with singular NPs only. It does not cooccur with proper names and mass nouns. This is illustrated in (11).\(^7\)

(11) a. Ik heb *een* boek gelezen
    \(I\ have\ a\ book\ read\)
  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
    \(I\ have\ a\ spinach\ eaten\)

In the N van een N construction the second noun (henceforth N₂) may be plural, as in (12); *een* also precedes proper names ((13)) and mass nouns ((14)).\(^8,9\)

(12) a. *dat* schandaal van *een* directeurssalarissen
    \(that\ outrage\ of\ a\ managers'\ salaries\)
  b. *die* ramp van *een* getalscongruentiefeiten
    \(that\ disaster\ of\ a\ number\ agreement\ facts\)

\(^7\)The examples in (11b) and (11d) are acceptable with an exclamative interpretation (cf. note 21).

\(^8\)Normally, proper names do not combine with indefinite articles; and to the extent that they do, the semantic contribution they make is special (see also Longobardi 1994, pp. 636, 693) – cf., e.g., *We hebben een Cantona in de ploeg* 'we have a Cantona in our team', in which *een Cantona* is used to refer to the kind of soccer player that Eric Cantona represents. In the examples in (13) *een* does not have these properties; it does not 'belong to' the proper name, which is definitely definite and does not denote a kind/type but an actual token.

\(^9\)There is some variation among speakers of Dutch with respect to their judgements of some of the examples to follow (especially (12) and (14)). This may be related to the speaker variation found in the N van een N constructions with differences in gender between the two noun phrases (cf. Everaert 1992 for relevant discussion). For us (and most of the other speakers we have consulted), however, all of the examples in (12)–(17) are acceptable, some being slightly marginal (as indicated by question marks).
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(13) a. dat juweeltje van een Paleis op de Dam
     *that little-jewel of a Palace on the Dam
b. die pracht van een Westertoren
     *that beauty of a Westertoren
(14) a. een pracht van een spinazie
     a beauty of a spinach
b. die rommel van een Koreaans speelgoed
     *that junk of a Korean toys

The spurious indefinite article also shows up in front of collective nouns, such as politie ‘police’, which normally do not allow the occurrence of an indefinite article.

(15) a. *Ik heb een politie gezien
     I have a police seen
b. die mafia van een politie
     *that mafia of a police

These N van een N cases clearly show that the indefinite article preceding N₂ does not form a constituent with N₂. In the case of (12)–(14a) one might perhaps want to say that the indefinite article preceding N₂ underlyingly belongs to the inverted predicate nominal, which is singular and not a proper name or a mass noun. But the examples in (14b) and (15b), with a mass noun as N₁, show that this cannot be right, a conclusion that is further confirmed by the examples in (16) and (17).

(16) dat tuig van een voetbalsupporters
     *that scum of a soccer supporters
(17) a. die idioten van een regering
     those idiots of a government
b. die schatten van een kinderen
     those darlings of a children

Since Dutch tuig ‘scum’ does not normally combine with an indefinite article (cf. *een tuig), een in (16) does not belong to N₁. And this conclusion is reinforced by the examples in (17a) and (17b), the latter forming perhaps the strongest confirmation of the conclusions in (18): in (17b) there can of course

¹⁰In the English N of a N construction a does not behave as a spurious article in the way Dutch een behaves. However, in older stages nominal phrases such as that clever little wretch of a Rebecca (William Makepeace Thackeray) are attested. According to one of the reviewers examples like these sound very archaic and are not terribly productive, giving rise to the very marginal status of examples such as *that beauty of a Matterhorn.
be absolutely no escaping the conclusion that the indefinite article cannot form a constituent with either noun present in the construction, for the simple reason that plural nouns cannot be preceded by indefinite articles in Dutch.\textsuperscript{11}

(18) a. the indefinite article preceding N\textsubscript{2} in the \textit{N van een N} construction does not ‘belong to’ N\textsubscript{2}

b. the indefinite article preceding N\textsubscript{2} in the \textit{N van een N} construction does not ‘belong to’ N\textsubscript{1}

A further argument supporting (18b) relates to the fact that Predicate Inversion apparently forces the presence of the spurious indefinite article, while with \textit{als} ‘like’ in front of the non-inverted predicate nominal an indefinite article does not always precede the second noun. Let us consider the examples in (19).

(19) a. Ik beschouw [die jongen als (een) oplichter]
    \textit{I consider that boy as (a) con man}

b. met [die jongen als (\textsuperscript{?}een) oplichter]
    \textit{with that boy as (a) con man}

In the nominal small clauses in the complement of consider type verbs (19a), and in the complement of absolute met ‘with’ ((19b)), the presence of \textit{een} is optional, corresponding with a difference in meaning similar to the difference we find in (20) (cf. Stowell 1991).

(20) a. Die jongen is oplichter
    \textit{That boy is con man}

b. Die jongen is een oplichter
    \textit{That boy is a con man}

The interpretive difference between (20a) and (20b) does not concern us here. What is relevant for our purposes is that \textit{een} is not optional in the corresponding \textit{N van een N} construction, as is shown in (21).

(21) die oplichter van *(een) jongen
    \textit{that con man of a boy}

So what we are left with is the conclusion that the spurious indefinite article sandwiched between the two nouns of the Dutch \textit{N van een N} construction belongs to neither.

\textsuperscript{11}As will become clear in section 5, (17b) is the only one of the examples in (12)–(17) in which the spurious article in front of N\textsubscript{2} can be left out.
With this said, we can now discard two important approaches to the syntax of the \( N \) van een \( N \) construction, not only the one in (22a) (represented in Abney 1987; Everaert 1992; Napoli 1989; also cf. McCawley 1987, 1988), which we already cast severe doubt on in connection with (6), but also the approach in (22b) (proposed by Kayne 1994, p. 106).\(^{12,13}\)

(22) a. \([\text{NP} \; [\text{Spec} \, \text{die}] \; [N\, \text{beer} \; [\text{PP} \, \text{van} \; [\text{NP} \, \text{een} \, \text{vent}]rio]]])\)

\[(\text{Abney 1987; Everaert 1992; Napoli 1989)}\]

b. \(\text{die} \; [\text{D/PP} \, \text{[beer]}] \; [\text{D/P} \, \text{van}] \; [\text{IP} \, \text{een} \, \text{vent} \, I^0 \, t_j ])\)

\[(\text{Kayne 1994)}\]

The two analyses differ in many respects, (22a) taking the van een \( N \) sequence to be the complement of \( N_1 \), and (22b) being close to our overall approach in taking the \( N \) van een \( N \) construction to feature inversion of the predicate around its subject. But what both analyses share is that the sequence of een and \( N_2 \) is taken to be a regular NP, the indefinite article preceding the second noun forming a constituent with it. The facts of the \( N \) van een \( N \) construction just discussed show that this is inaccurate. For Dutch this is shown unequivocally by the examples in (12)–(17).

\(^{12}\) An additional problem that (22a) runs into is that the predicative noun can take a complement of its own, as in the example in (i) (for similar examples from English, given in (ii), see Aarts 1994, p. 11). This example is clearly incompatible with (22a) since the first noun cannot take both the first, full PP and van een \( N \) as its complement. It should be pointed out in this connection that, according to Napoli (1989, pp. 214–215, 220–221), \( N \) of a \( N \) constructions of the type in (iib,c) are totally unacceptable in American English, but fine in British English. (iib) is well-formed across the board, presumably because sonofabitch has been reanalysed as a complex noun (cf. the reduced realisation sumbitch, pointed out by a reviewer).

(i) dat tuig van de richel van een voetbalsupporters

\text{that scum of the border of a soccer supporters} \hspace{2cm} \text{(cf. (16))}

(ii) a. that son of a bitch of a boss
b. that destroyer of education of a minister
c. this manipulator of people of a mayor

\(^{13}\) Another problem for the analysis in (22a) is that the PP in (22a) does not behave as a PP with respect to preposing (Topicalisation, Wh-movement, Scrambling) or postposing (PP-over-V). PP-extraction from NP is generally possible (subject to conditions) but is categorically impossible in the \( N \) van een \( N \) construction. Relevant examples are given in (i).

(i) a. *[Van een vent] heb ik [die beer t] gezien

\text{Of a man have I that bear seen}

b. *Ik heb [een beer t] gezien [van een vent]

\text{I have a bear seen of a man} \hspace{2cm} \text{Topicalisation} \hspace{2cm} \text{PP-over-V}
The facts discussed so far seem to suggest that the indefinite article in front of $N_2$ is a totally spurious element. Wouldn’t that favour an analysis along the lines of (23), proposed by Aarts (1994)?

\[(23) \quad [\text{NP } [\text{Spec die }] [\text{N'} [\text{NP beer van een}] [\text{N'} \text{ vent}]]]\]

Aarts analyses everything intervening between die and vent in an example like die beer van een vent as a complex modifier of the head noun. On an account of this type the indefinite article preceding the second noun ‘belongs to’, or forms a constituent with, neither of the two nouns at any point in the derivation. It thus seems to accommodate the facts brought up in the above without any trouble.

Two things should be stressed with regard to the analysis in (23), however. First of all, (23) has no light to shed on the obligatory presence of van in the $N$ van een $N$ construction: van (like the indefinite article following it) is treated like a completely insignificant little element in the linear string, whose presence seems totally accidental. In addition to this, we should note that the structure in (23) postulates an out-of-the-ordinary type of complex modifier (treating beer van een as a constituent). Moreover, the fact that $N_1$ in the $N$ van een $N$ construction is interpreted as a predicate remains unaccounted for.

And secondly, there is evidence to show that the distribution of the indefinite article preceding the second noun in the $N$ van een $N$ construction is not in fact entirely unconstrained. While the facts of Dutch that we discussed above may give rise to the conclusion that ‘anything goes’ as far as this indefinite article is concerned, English $N$ of a $N$ constructions show that there are clear restrictions on the occurrence of this article in front of $N_2$.

In our discussion of the properties of the indefinite article preceding $N_2$ in the $N$ van een $N$ construction, English has so far played no role. In establishing that this article belongs to neither of the two nouns, we relied entirely on Dutch facts. But Dutch and English diverge in an interesting fashion in the domain of number disagreement facts in $N$ of a $N$ constructions. In Dutch, grammatical examples can be found for both cases of number disagreement (plural subject and singular predicate nominal, as in (12); singular subject and plural predicate nominal, as in (17a); and it even turns out to be possible to find $N$ van een $N$ constructions with two plural nouns in which the second is preceded by an indefinite article (see (17b)). In English only the counterparts of the example in (17a) give rise to an acceptable result:

\[(24) \quad \begin{align*}
    \text{a.} & \quad \text{that disaster of a number agreement facts} \\
    \text{b.} & \quad \text{those fools of a police force} \\
    \text{c.} & \quad \text{those darlings of a children}
\end{align*}\]

Observationally, it seems that English allows an indefinite article to precede a singular noun but that it strictly rules out any indefinite articles to the
immediate left of a plural noun. We will come back to this difference between Dutch and English later (section 5). For our purposes here it is relevant to establish that it would be difficult to account for the differences between Dutch and English if we took a/een as part of an idiomatic specifier as in (23).

What we would like to claim instead is that the distribution of the indefinite article preceding N₂ in the English and Dutch N of a N construction gives rise to an analysis in which the article is the lexical realisation of the small-clause-internal head X in the structure in (7). This article is moved to the head of the functional projection (FP in (7)), as a consequence of which it is found in a position to the left of N₂. There are two arguments to support this hypothesis. First, the small-clause-internal head entertains a Spec-Head agreement relationship with the projection of N₂ (the small clause subject) and thereby may show a sensitivity to the number features of that NP in the English N of a N construction, even though it does not form a constituent with it at any point in the derivation.

A second argument concerns the fact that the spurious article does not co-occur with als ‘as/like’, as is demonstrated by the examples in (25).\(^\text{14}\)

(25) a. handen als (*een) kolenschoppen
   hands like (a) coal shovels

   b. kolenschoppen van (een) handen
   coal shovels of (a) hands

The impossibility for een to occur in (25a) suggests that als and the spurious article compete for the same structural slot, hence will be in complementary distribution. Aarts (1992) identifies als as a lexicalisation of a small-clause-internal functional head, our X in (7). The complementarity of als and spurious een shown in (25a) then confirms our claim that the spurious article preceding N₂ in the N van een N construction is the head X in the small clause structure in (7).

5. The distribution of spurious articles in Dutch and English

As a vantage point for the discussion of the difference between English and Dutch with regard to the distribution of the spurious indefinite article, let us

\(^\text{14}\) That the article in (25b) is a spurious article is evidenced by the fact that the noun following een in (25b) is plural. The ungrammaticality of een in the plural (25a) should be contrasted with the grammaticality of (19) and (20b), in which the noun following een is singular. This shows that non-inverted predicates may be preceded by a regular article een which is sensitive to plurality, whereas the article in inverted predication constructions is the spurious article discussed here.
first of all present a survey of the various (im)possibilities in the N of a N construction:

(26) a. *English N of a N constructions and spurious articles*

<table>
<thead>
<tr>
<th></th>
<th>with a</th>
<th>without a</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular of (a) singular</td>
<td>idiot of a man</td>
<td>*idiot of man</td>
</tr>
<tr>
<td>plural of (a) singular</td>
<td>idiots of a police force</td>
<td>*idiots of police force</td>
</tr>
<tr>
<td>singular of (a) plural</td>
<td>*disaster of a facts</td>
<td>*disaster of facts</td>
</tr>
<tr>
<td>plural of (a) plural</td>
<td>*idiots of a men</td>
<td>idiots of men</td>
</tr>
</tbody>
</table>

(26) b. *Dutch N van een N constructions and spurious articles*

<table>
<thead>
<tr>
<th></th>
<th>with een</th>
<th>without een</th>
</tr>
</thead>
<tbody>
<tr>
<td>singular van (een) singular</td>
<td>idioot van een man</td>
<td>*idioot van man</td>
</tr>
<tr>
<td>plural van (een) singular</td>
<td>idioten van een regering</td>
<td>*idioten van regering</td>
</tr>
<tr>
<td>singular van (een) plural</td>
<td>ramp van een feiten</td>
<td>*ramp van feiten</td>
</tr>
<tr>
<td>plural van (een) plural</td>
<td>idioten van een mannen</td>
<td>idioten van mannen</td>
</tr>
</tbody>
</table>

A bird’s eye view of the two tables leads to the conclusions below:
- Dutch and English do not differ in the article-less column
- while English allows a only in the presence of a singular small clause subject, Dutch allows een in all four cases

For English, the distribution of the spurious indefinite article is easily captured by the statement that a is specified as [-PLUR], hence can only co-occur with a [-PLUR] small clause subject, given the specifier-head agreement relationship within XP (see (7)). For Dutch, we clearly cannot say that spurious een is specified for number; instead, what we will assume is that:
- Dutch spurious een is unspecified for number

This will render een compatible with any NP in its specifier, regardless of the latter’s number specification: a clash in number features will never arise within XP.

So far we have been concerned only with the contexts in which the spurious indefinite article can be realised. Now let us turn to the rightmost column in the tables in (26a) and (26b) and ask under which circumstances the head of XP in the structure of N of a N constructions can remain empty. For both languages, it turns out that only in the bottom example, in which both nouns are plural, can the indefinite article be absent. The question is why this time X should be sensitive not just to the number specifications of the NP in its specifier but also to those of the inverted predicate nominal; and perhaps even more poignantly, how X can be ‘doubly sensitive’ at all.
To answer this latter question first, consider what happens in the derivation of the *N of a N* construction. The predicate nominal inverts with its subject, an instance of Predicate Inversion which is contingent on domain extending movement of X to F. After Predicate Inversion, then, we end up with the following configuration:

\[(27) \quad [\text{FP Pred}_j [F + X_i [\text{XP Subj} [X_i \ 't_i \ t_j]]]]]\]

In (27) X entertains a Spec-Head agreement relationship with its subject in SpecXP, but as a result of its incorporation into F it also acquires a derived Spec-Head agreement relationship with the inverted predicate nominal in SpecFP. In this way, the distribution of X’s zero allomorph can be made sensitive to the features of both nominals.

To capture the distribution of the zero allomorph of X in the *N of a N* construction, what we can now say is that:

- the zero allomorph of X is licensed if neither NP with which it entertains a (derived) Spec-Head agreement relationship is explicitly singular

This generalisation captures the English and Dutch facts all at the same time. In general, what we can say about the distribution of zero determiners in English and Dutch is that zero determiners are possible just in case they do not entertain a Spec-Head agreement relationship with any singular noun.

There is no difference, then, between Dutch and English with regard to zero determiners; in both cases the occurrence of the zero allomorph is dependent on the plurality of both nouns in the *N of a N* construction. This requires an analysis in which the article entertains a structural relationship with the two nouns, as in the analysis given above. Where the two languages differ is in the specification of the spurious indefinite article itself: since English *a* is specified [-PLUR] while Dutch *een* is unspecified for number, the former has a much more restricted distribution than the latter, as is apparent in the middle column in (26a) and (26b).\(^{16}\)

\(^{15}\) We will not take a stand on the directionality of X-adjunction to F; we will represent the outcome of incorporation simply as F+X. In accordance with antisymmetry (Kayne 1994), we would tend to opt for left-adjunction; but the surface order does not reflect this since *a* (which is contained in X) linearly follows of.

\(^{16}\) A sentence like (i) appears to be a problem for our assumption that *a* is not a constituent with the subject of the DP-internal small clause but rather forms a unit with *of* after head movement. Under our analysis we might expect that one-replacement can be applied to *coach*, yielding *a dunce of a one*. The fact that appearance of *a* in (i) leads to ungrammaticality might be interpreted as evidence for the idea that *a* forms a constituent with the small clause subject.

(i) To keep the team consistently victorious, it takes a real genius of a coach and to lose so consistently it takes a real dunce of (*a*) one
6. The spurious indefinite article in other constructions

It is interesting to note that languages may possess a specialised form of the indefinite article that occurs in predication contexts. Consider the following examples from Swedish (cf. Delsing 1993, p. 34; similar such examples can be found in colloquial Faroese and Norwegian dialects):

(28) a. Pelle och Lisa är *(ena) djävlar på grammatik

   Pelle and Lisa are a devils on grammar

   b. Lisa och Kalle är *(ena) riktiga doktorer

   Lisa and Kalle are a real doctors

The form ena used in these examples is something like the plural form of the singular indefinite article. Swedish does not normally have plural indefinite articles; the use of ena is restricted to predication contexts. In the examples in (28), ena makes a special semantic contribution: (28b) with ena present expresses that the referents of the subject pronoun behave like, or give the impression of being, real doctors; they need not be genuine doctors at all.17

Two things are noteworthy about this Swedish article. First, it precedes plural and also (in its singular incarnation en/ett) uncountable nouns (cf. de var *(ett) stort kaffe du lagar ‘it was a strong coffee you make’; Delsing 1993, p. 35), like the spurious indefinite article of Dutch (cf. (14)/(15)). And secondly, and very interestingly from our perspective, it shows up in the Swedish wat voor construction, as (29) shows (cf. Teleman 1952, p. 52; Delsing 1993, p. 35; present examples due to Christer Platzack, p.c.):

However, constituency does not seem to be the real issue here; the proform one cannot replace the NP-complement of the indefinite determiner a either: *They fired a French coach and we fired *(a) one too. The descriptive generalisation seems to be that a can never be string-adjacent to the lexical proform one. Strings in which an attributive AP intervenes between the indefinite article and the lexical proform are permitted: a big one, that dunce of a French one.

Apparent violations of the above descriptive generalisation, such as how big a one and such a one (as she) might plausibly be analysed as deriving from an underlying structure in which the attributive element (how big, such) intervenes between the indefinite article and the lexical pro-form. That is, the derived structure of these strings might look as follows: [how big/such; a t; one].

We tentatively propose that in the well-formed a real dunce of one, one should not be treated as a lexical proform replacing an NP but rather as the strong form of the (spurious) indefinite article. In the line of Lobeck’s (1995) claim that the strong indefinite article one can license a PRO-complement (as in I bought [DP one [NP pro]]), we will assume that the strong spurious article is able to license an empty pronominal (i.e., pro) occupying the small clause subject position: [DP a [FR real dunce; [FR [s of + one]] [NP pro [XP t]]]].

17The same interpretive difference is found in Dutch and German constructions of the type in (20). See Stowell (1991) for a discussion of these constructions and the differences between English and Dutch/German in this respect.
(29) a. vad för (en) pojke?
   what for a boy
b. vad för (ena) pojkar?
   what for a boys

Thus the Swedish facts in (28) support the postulation of a special form of the indefinite article for predication contexts. And the Swedish examples in (29) indicate that the *vad för* construction features DP-internal predication, as evidenced by the appearance of *en(a). The Swedish facts thus pave the way for a broader discussion of the distribution of spurious indefinite articles.

Taking up the Swedish lead, let us conduct a comprehensive survey of the distribution of the spurious indefinite article across the various types of DP-internal predication constructions listed in the righthand column of our table in (1). The table in (30) presents the empirical facts (where we have ignored cases of number disagreement in the *N van een N* construction, to keep things simple). And the table in (31) sums up the results in a somewhat more transparent and easily accessible fashion.

(30) **DP-internal predication constructions across sing/plural and een/no een distinctions**

<table>
<thead>
<tr>
<th></th>
<th>singular, no een</th>
<th>plural, no een</th>
<th>singular, een</th>
<th>plural, een</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>N van een N</em></td>
<td>*die etter van</td>
<td>etters van</td>
<td>die etter van</td>
<td>etters van</td>
</tr>
<tr>
<td></td>
<td>*that creep of</td>
<td>creeps of</td>
<td>*that creep</td>
<td>creeps of</td>
</tr>
<tr>
<td>jongen?</td>
<td>jongens</td>
<td>jongens</td>
<td>jongen</td>
<td>jongens</td>
</tr>
<tr>
<td>boy</td>
<td>boys</td>
<td>boy</td>
<td>boys</td>
<td></td>
</tr>
<tr>
<td><em>wat voor</em></td>
<td>wat voor</td>
<td>wat voor</td>
<td>wat voor een</td>
<td>wat voor een</td>
</tr>
<tr>
<td><em>what for</em></td>
<td><em>what for</em></td>
<td><em>what for</em></td>
<td><em>what for</em></td>
<td><em>what for</em></td>
</tr>
<tr>
<td>jongen?</td>
<td>jongens</td>
<td>jongens</td>
<td>jongen?</td>
<td>jongens?</td>
</tr>
<tr>
<td>boy</td>
<td>boys</td>
<td>boy</td>
<td>boys</td>
<td></td>
</tr>
<tr>
<td><em>wat-EXCL</em></td>
<td>*wat jongen!</td>
<td>*wat jongens!</td>
<td>*wat een jongen!</td>
<td>*wat een jongens!</td>
</tr>
<tr>
<td><em>what boy</em></td>
<td><em>what boys</em></td>
<td><em>what a boy</em></td>
<td><em>what a boys</em></td>
<td></td>
</tr>
</tbody>
</table>

(31) **Summary**

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>no een</td>
<td>*N van een N</td>
<td>*N van een N</td>
</tr>
<tr>
<td>wat voor-WH</td>
<td>✓</td>
<td>wat voor-WH</td>
</tr>
<tr>
<td>wat-EXCL</td>
<td>*</td>
<td>wat-EXCL</td>
</tr>
<tr>
<td>eing</td>
<td>*N van een N</td>
<td>✓</td>
</tr>
<tr>
<td>wat voor-WH</td>
<td>✓</td>
<td>wat voor-WH</td>
</tr>
<tr>
<td>wat-EXCL</td>
<td>✓</td>
<td>wat-EXCL</td>
</tr>
</tbody>
</table>
The generalisations with regard to the distribution of *een* that emerge from these tables are the following:

- in the *N van een N* construction *een* is obligatory in singulars and optional in plurals
- in the *wat voor* interrogative construction *een* is always optional
- in the *wat* exclaimative construction *een* is always obligatory

The question of course is how we can make sense of these generalisations.

We will approach this question from the perspective of the one construction that we have so far gained a clear picture of, the *N van een N* construction. To capture the fact that in the *N van een N* construction *een* is obligatory in singulars and optional in plurals, we have made two specific claims about the Dutch spurious indefinite article *een* and its zero allomorph. These are listed in (32):

(32) a. Dutch spurious *een* (the lexicalisation of X in (7)) is unspecified for number\(^\text{18}\)

    b. Dutch spurious *een* has a zero allomorph, which is licensed just in case it entertains no Spec-Head agreement relationship with any singular NP

\(^{18}\)It is interesting to observe that in the *wat voor* construction spurious *een* 'a' can be replaced by *één* 'one' in one particular circumstance only. Although *[wat voor één jongen]* is completely unacceptable, the phrase *wat voor één* is acceptable if the noun *jongen* is left out, as in (i).

(i)  *[Wat voor één] heb jij er gezien?*

    *what for one have you there seen*

The specifics of the construction involving so-called Quantitative *er* and a DP with an empty NP do not concern us here (cf. Bennis 1986). What is important for our purposes here is that in (i) only *één* may occur. Replacing *één* by *een* or by another numeral or quantifier gives rise to clear ungrammaticality, as is shown in (ii).

(ii)  *[Wat voor een/twee/veel] heb jij er gezien?*

    *what for a/two/many have you there seen*

Another interesting aspect of the construction in (i) is that the numeral *één* does not behave similar to spurious *een*, since it does not allow a plural (empty) noun. This is shown in the contrast in (iii).

(iii) a. *[Wat voor één] heeft/hebben er mij gezien?*

    *What kind of one has/has there me seen*

    'What kind of one has seen me'

    b. *[Wat voor een jongens] hebben/heeft mij gezien?*

    *what for a boys have/has me seen*
(32a) correctly ensures that *een can be used across the board in all Dutch *N van een N constructions. After all, *een is compatible with any NP in its specifier, regardless of the NP’s number specification; a clash in number features will never occur. And (32b) takes care of the fact that *een cannot be dropped in singular *N van een N constructions.

When we now consider the other two DP-internal predication constructions, we see that the two rightmost columns in (30) do not confront us with any deviations from the N van een N pattern. As before, *een is possible across the board, thanks to its being unspecified for number. But in the ‘no *een’ columns some unexpected things crop up. In particular:

- the grammaticality of *wat voor jongen? is surprising
- the ungrammaticality of *wat jongens! is surprising

We would not expect the possibility of the zero allomorph of X in *wat voor jongen? since jongen is explicitly singular. And by contrast, nothing so far seems to block exclamative *wat jongens! After all, *wat cannot be said to be explicitly singular, in the light of (33c), where it must be *wat that brings about plural verb agreement.

(33) a. Dat is/*zijn een etter
   that is/are a creep
b. Dat zijn/*is etters
   that are/is creeps
c. Wat zijn dat?
   what are that

Dutch één is like English a in that it is specified as being [−PLURAL]. The fact that other numerals and quantifiers do not appear in the position of één in (i) indicates that één occupies the same position as een in other instances of the wat voor construction, i.e., the head of the DP-internal small clause. What remains to be answered is the question why een has to be replaced by één in (i). We will assume that there is a rather superficial rule of Dutch that changes the phonologically weak een into the strong numeral één in those cases in which een directly precedes an empty NP (pro), probably for prosodic reasons (similar to the case of one replacement in English, discussed in note 16). Other relevant instances of this rule are given in (iva,c).

(iiv) Hij heeft een blauwe auto met een zwart dak en
   he has a blue car with a black top and
a. ik heb er ook *een/één
   I have there also alone
b. ik heb een/één blauwe
   I have alone blue
c. ik heb er *een/één met een blauw dak
   I have there alone with a blue top
We will not tamper with any of the conclusions that emerged from our account of the distribution of the spurious indefinite article in the $N \text{ van een } N$ construction. So to accommodate the ungrammaticality of *wat jongens! and the grammaticality of wat voor jongen? we will take the alternative route of devising accounts of the wat exclamative and wat voor constructions that capture the facts in the tables in (30) and (31). We will approach the analysis of wat (voor) constructions from the perspective of the ‘meaning’ of the bare quantifier wat, which is configurationally determined.

7. Wat constructions

7.1. On the ‘meaning’ of wat and the meaning of structure

Our first step in the development of the accounts of wat voor and wat exclamative constructions is concerned with the element wat showing up in these constructions. This element can be found in a variety of contexts in Dutch. For the clausal domain, this has been studied in detail by Postma (1994, 1995a,b) and Bennis (1995), who both come to the conclusion that wat lacks sufficient inherent lexical meaning and that it is the structural configuration in which wat occurs that gives rise to its interpretation. Put differently, the (illocutionary) semantics of constructions with wat is read off their structure. This is what Bennis (1995) refers to as ‘the meaning of structure’.

To see this, let us examine the paradigm in (34), which illustrates the different functions that the element wat can have in Dutch clauses:

\begin{itemize}
\item[(34) a.] Hij heeft wat gegeten \hfill \text{[indefinite]}
\begin{align*}
&\text{he has what eaten} \\
&\text{‘He ate something’}
\end{align*}
\item[(34) b.] Wat heeft hij gegeten? \hfill \text{[interrogative]}
\begin{align*}
&\text{what has he eaten} \\
&\text{‘What did he eat?’}
\end{align*}
\item[(34) c.] Wat heeft hij gehuild (zeg)! \hfill \text{[exclamative]}
\begin{align*}
&\text{what has he cried dppt} \\
&\text{‘Boy, did he cry!’}
\end{align*}
\end{itemize}

An account trying to capture the different ‘meanings’ of wat with the aid of lexical semantic specifications would not get us very far here. We would have to distinguish three different lexical items wat. An important observation is that the different interpretations of wat show a non-overlapping distribution syntactically. The fact that these three interpretations of wat are distinguishable in terms of the syntactic configuration would remain completely accidental under a lexical approach. A more sensible approach would
hold that *wat* is an underspecified quantifier and would seek to relate the different interpretations of *wat* in (34a–c) to the structural configuration in which it appears: if *wat* remains within VP ((34a)), it receives an indefinite interpretation by existential closure (cf. Diesing 1988); if *wat* is moved to SpecCP, it receives an interrogative interpretation if it binds a variable in an argument position (the object of *gegeten* ‘eaten’ in (34b)) while in (34c) it is not related to an argument position.\(^{19}\)

As is shown in Bennis (1995), the interpretations *wat* may receive as part of a DP are strikingly similar to the interpretations of ‘single’ *wat*. The range of interpretations of DP-internal *wat* is given in (35).

(35) a. Ik heb [**wat** boeken] gelezen

   *I have* what books *read*

   ‘I read some books’

b. [**Wat** voor boeken] heb jij gelezen?

   *What for books* have you *read*

   ‘What kind of books did you read?’

c. [**Wat** een boeken] heb jij gelezen?

   *What a books* have you *read*

   ‘Boy, did you read a lot/kind of books!’

To account for the parallelism between (34) and (35) we will assume that, as Szabolcsi’s (1983, 1992) work on the syntax of noun phrases has shown, there is a substantial degree of parallelism between CP and DP (cf. Kayne 1994). Leaving aside the indefinite constructions here, we will express the differences between (34b) and (34c) and between (35b) and (35c) by assuming abstract features in the highest functional projection of the clausal (CP) and nominal (DP) domain:

- the *wat* interrogative construction has a [+WH] C/D-head
- the *wat* exclamative construction has a [+EXCL] C/D-head

We thus assume that the type of illocution – i.e., declarative, interrogative, exclamative, imperative, etc. – is formally marked by a feature in the highest functional projection of a particular lexical domain. A proposal along these lines has to be adopted given that these different clause types show characteristic syntactic properties that do not reside in lexical elements.

Movement of the *wh*-form *wat* to the specifier of the highest functional projection will then determine the apparent interrogative or exclamative interpretation of *wat* in (34b,c) and (35b,c). The D-head in *wat* (*voor*) constructions, like the C-head in their clausal counterparts, triggers overt raising of

\(^{19}\) A proposal that is similar in various respects has been put forward for the Chinese quantifiers *shenme* ‘what’ and *shei* ‘who’ by Cheng (1991) among others.
wat to its specifier. By so raising, wat ends up in a position to the left of its subject, as required in the light of the word-order facts. So this will allow us to capture the word order of wat (voor) constructions. And the problems that these constructions posed with regard to the distribution of the spurious indefinite article will dissolve once we answer the following question:

- do the [+WH] and [+EXCL] operator heads need to be lexicalised, and if so, how are they lexicalised?

7.2. The wat exclamative construction

We can be brief about the [+EXCL] operator. Apparently movement of wat to SpecDP requires the D-head to be lexical in exclamative DPs. This is reminiscent of the Verb Second effect in (main) clauses. An obvious way to provide D with content is to raise een, the X-head internal to the small clause, to D. We thus reach the following hypothesis:

- In the wat exclamative construction, the [+EXCL] D-head position must be lexically filled by the spurious article een\(^{20}\)

This gives us the full derivation of the wat exclamative construction, which can now be summarised as in (36):

\[
\begin{align*}
(36)\, a. & \quad \text{The derivation of the wat-exclamative construction} \\
& \quad [\text{DP } \text{wat}\textsc{\textsubscript{j}}][\text{D} [\text{X } \text{een}\textsc{\textsubscript{i}}][\text{XP jongen}(s)[\text{X'} \ t_i \ t_j]]) \\
(36)\, b. & \quad \text{DP} \\
& \quad \text{Spec } \text{wat}\textsc{\textsubscript{j}} \\
& \quad \text{D'} \\
& \quad \text{DP} \\
& \quad \text{Spec } \text{een}\textsc{\textsubscript{i}} \\
& \quad \text{D}^{[\text{exter}} \\
& \quad \text{Spec } \text{jongen} \\
& \quad \text{X'} \\
& \quad \text{X} \\
& \quad \text{LP} \\
& \quad \text{t}_i \\
& \quad \text{t}_j \\
\end{align*}
\]

In (36) the motivation for the insertion of spurious een is different from the motivation of een in the \textit{N van een N} construction. In (36) spurious een is

\(^{20}\)As one of the reviewers points out, there are counterexamples to this hypothesis. Instead of een we also find (somewhat marked) the quantifiers veel 'much/many' and weinig 'little/few', as in (i).

(i) \quad a. Wat veel jongens lopen daar!

\quad \textit{what many boys walk there}

\quad b. Wat weinig fouten staan er in dit opstel!!

\quad \textit{what few mistakes are there in this essay}
inserted and moved in order to lexicalise the head of the exclamative operator projection (DP). In the $N$ van een $N$ construction een is inserted and moved in order to allow A-movement to take place without violating strict locality. In both cases, however, een originates as the head of a small clause of which the predicate is moved to a position in front of the subject. The fact that een is obligatorily present in the wat exclamative construction but not in the $N$ van een $N$ construction is the consequence of differences in the trigger for its appearance. The main point we want to make here is that the availability of spurious een is dependent on DP-internal predication, represented as a small clause headed by een.21

Let us now move on to consider the distribution of the spurious indefinite article in interrogative wat voor constructions, which pose the problem of how Dutch wat voor jongen? ‘what for boy’ can be grammatical.

7.3. The wat voor interrogative construction and the spurious article

The first thing to discuss about the analysis of the wat voor construction is the status of the element voor that characterises the construction and which makes it differ from the wat exclamative construction. The only lexical element in this construction that may give rise to an interrogative interpretation is voor ‘for’. We will claim that:

- voor is the spell-out of the [+WH] operator D-head present in the structure of the wat voor interrogative construction

The idea that voor is a [+WH] operator head – or, put differently, a prepositional complementiser with an interrogative force – is highly plausible in light of the fact that many southern varieties of Dutch and substandard Dutch in fact use

21 We will not attempt to present a full account of exclamative constructions in Dutch. The array of relevant data is rather complex. In addition to the cases discussed here, an example of which is given in (i), we also find exclamative constructions of the types in (ii)–(iv).

(i) Wat *(een) idioten zijn dat zeg!
what an idiots are that dpred

(ii) Wat zijn dat (een) idioten zeg!
what are that an idiots dpred

(iii) Dat zijn me toch (een) idioten!
that are me prt a boys

(iv) (Een) idioten dat dat zijn!
an idiots that that are
‘What idiots they are!’

Although an analysis of this set of exclamative constructions can be provided in line with the analysis given above, we will not attempt to do so here, given that it will lead us too far from the main line of argumentation. Some discussion of these constructions can be found in Corver (1990).
voor as the infinitival complementiser in constructions that feature operator movement to SpecCP, as the example of an infinitival relative in (37) shows. Voor, then, is the lexical reflex of the [+WH] feature of the D-head of the wat voor construction.

(37) a. een boek [Op voor in te kijken]
   a book for into to look
   'a book to look into'

b. Dat is een man [Op voor in het oog te houden]
   that is a man for in the eye to keep
   'That is a man to keep an eye on'

With voor filling the D-head, the spurious indefinite article is not required to lexicalise D, unlike in the case of wat exclamatives. This is how the difference between (38a,b) falls out:

(38) a. wat voor (een) Jongens?
   what for a boys

b. wat *(een) jongens!
   what a boys

But if voor is the spell-out of the [+WH] D-head in the wat voor construction, why would we ever need spurious een here? Put differently, the presence of een seems to be unnecessary in (38a); so why is it optionally present after all?

While the question about (38a) is one of overrepresentation, the converse question is also posed by the wat voor construction: (39a) without een mysteriously lacks a token of the indefinite article, which is obligatory in this context in all other constructions discussed in this paper, as illustrated in (39b,c).

(39) a. wat voor (een) jongen?
   what for a boy

b. wat *(een) jongen!
   what a boy

c. een schat van *(een) jongen
   a darling of a boy

In those variants of Dutch it is absolutely impossible to introduce infinitival complements by voor instead of the ‘normal’ infinitival complementiser om. This is shown in (i), which is ungrammatical in all variants of Dutch.

(i) *Ik probeer voor dat boek in te kijken
   I try for that boek into to look
   'I try to look into that book'
To start off with this second question, let us first of all make it clear what it is that the grammaticality of (39a) without een shows. We have argued that the head X in the structure of N van een N has two lexical allomorphs, the overt indefinite article een and a zero allomorph. The zero allomorph, as we have seen, is subject to stringent licensing conditions. In particular, the zero allomorph is licensed if X does not agree with any explicitly singular noun phrase. But in the wat voor construction in (39a) X agrees with jongen, which definitely is explicitly singular. This means that X in the structure of (39a) cannot be instantiated by its zero allomorph. Two options then remain: (i) either X is spelled out as een, the overt allomorph of X (as in wat voor een jongen), (ii) or X is radically empty, lacking any feature content (as in wat voor jongen):

- since the zero allomorph of the spurious indefinite article would fail to be licensed, X in the structure of (39a) without een must radically lack features (Ø)

And this in turn leads us to another immediate conclusion about wat voor interrogatives:

- X in wat voor interrogatives can be of two types: X can be radically featureless (Ø), as in (40a); and X can possess semantic and morphosyntactic features, as in (40b)

\[
\begin{align*}
(40) & \quad \text{a. } [\text{DP Spec } [D' voor [XP NP [X [X Ø] wat]]]] \\
& \quad \text{b. } [\text{DP Spec } [D' voor [XP NP [X [X een/ec] wat]]]]
\end{align*}
\]

The two structures in (40) lie at the basis of two alternative derivations of wat voor interrogatives, the ones given in (41) and (43). The derivation depicted in (41) involves direct A'-movement of the small clause predicate wat to SpecDP (as in the wat exclamative construction discussed earlier on).

\[
(41) \quad [\text{DP wat}_j [D' voor [XP jongen(s) [X [X Ø] t_j]]]] \quad (=40a)
\]

This derivation is perfectly legitimate. The requirement that the head [+WH] be lexically filled is met by voor in D. Notice that there is a crucial difference here
with the exclamative construction discussed in section 7.2, from which voor is absent. Since nothing lexicalises D directly in the exclamative construction, a lower head must be raised into D. The lower head in question is X. So X must be present in the structure of the exclamative construction. But in the wat voor interrogative construction, no een is necessary for the purpose of filling D, for voor already lexicalises D in the base.

The derivation sketched in (41) gives rise to wat voor interrogatives that systematically lack an indefinite determiner. So (41) predicts the following grammaticality pattern:

(42) a. wat voor jongen
    b. wat voor jongens
    c. (*wat voor een jongen
    d. (*wat voor een jongens

Clearly, this covers only fifty percent of the score, for the examples in (42c,d) are not in fact ungrammatical. But of course this is what we expect. After all, (40a) is only one of the two structures that the analysis led us to assign to wat voor interrogatives. We still have (40b) as an alternative. And (40b), we believe, lies at the basis of a derivation of wat voor constructions that blends the N van een N and wat exclamative constructions. That is, wat first of all inverts with its subject via Predicate Inversion, after which it raises on to SpecDP. This is depicted in (43):

• (40b) serves as the input to a derivation of the wat voor construction involving wat raising to SpecDP via prior Predicate Inversion to SpecFP, as in (43)

(43) \[
DP \[\text{DP} \ \text{wat}_j \[\text{D'} \ [\text{D} \ \text{voor} \ [\text{Spec} \ t_j \ [\text{F'} \ \text{F+X (een)} \ [\text{XP} \ \text{jongen(s)} \ [\text{X'} \ t_i \ t_j] \] \] \] \] \] \] = (40b)
As in the *N van een N* construction, the application of Predicate Inversion forces domain-extending head movement of X to F, as shown in (43). This is why, on the Predicate Inversion derivation of the *wat voor* construction, we need both F and X: we need F as a landing-site for domain-extending head movement, and we need one of X’s allomorphs to undergo this movement operation.

Since we need a featured X in the derivation in (43), we also need to abide by the rules regarding the distribution of the allomorphs of the spurious indefinite article realising X. In particular, only if X does not entertain Spec-Head agreement relationships with any explicitly singular noun phrase can X’s zero allomorph be used. As a result, the derivation built on (40b) gives rise to the following grammaticality pattern in the *wat voor* construction:

\[(44)\] (a) \((*)\) wat voor jongen  
\b wat voor jongens  
\c wat voor een jongen  
\d wat voor een jongens

This pattern directly matches the pattern of the *N van een N* construction.

Notice that the two derivations that are available in the *wat voor* construction – direct *wh*-movement of the predicate or Predicate Inversion followed by *wh*-movement – have a parallel in the clausal domain, as is illustrated in (45).

\[(45)\] (a) Down which hill did the baby carriage roll? \hspace{2cm} (wh-mvt)  
\b Down which hill rolled the baby carriage? \hspace{1cm} (Predicate Inversion + wh-mvt)

(45a) is the clausal counterpart of (41), and (45b) corresponds to (43).

When we now add up the paradigms in (42) and (44), what we see is that the sum total of the two analyses yields the desired result that ‘anything goes’ in the *wat voor* interrogative construction: the examples with *een* are derived via (40b) and the *een*-less ones via (40a), with the plural *een*-less case effectively being ambiguous between the two structures in (40).

The analysis in which *een* in the *wat voor* construction is not just an optional element but rather the consequence of one of the two derivations for the *wat voor (een)* interrogative construction is supported by a number of rather subtle arguments.

First, the fact that *wat voor jongen* can be derived only via (40a) makes an interesting prediction with respect to coordination. Given that in the plural variants the presence of *een* may really be optional, in the sense that both *wat voor jongens* and *wat voor een jongens* may be derived via (40b), we
expect a coordination of plural DPs to be free with respect to the occurrence of *een*. This appears to be the case, as is demonstrated in (46) (cf. Corver 1990, p. 135).

(46) a. wat voor jongens en meisjes?
    b. wat voor een jongens en een meisjes?
    c. ?wat voor jongens en een meisjes
    d. wat voor een jongens en een meisjes?

*what for (a) boys and (a) girls*

The singular *wat voor* construction is derived either via (40a), in which case *een* is absent, or via (40b), featuring the presence of *een*. Given the difference in structure, we might expect the two constructions to be incompatible in the case of coordination. This seems indeed to be the case, as is shown in (47).

(47) a. wat voor jongen en meisje?
    b. wat voor een jongen en een meisje?
    c. *wat voor jongen en een meisje?
    d. ??wat voor een jongen en meisje?23

*what for (a) boy and (a) girl*

A second difference between the two constructions concerns the fact that numerals may occur in the *een*-less construction only, as is shown in (48).

(48) a. Wat voor twee mooie vazen staan er op tafel?

*what for two beautiful vases stand there on table*

b. ??Wat voor *een* twee mooie vazen staan er op tafel?

This difference cannot be accounted for by claiming that spurious *een* and numerals do not co-occur, given the acceptability of the exclamative construction in (48).

(49) Wat een twee mooie vazen staan er op tafel!

*what a two beautiful vases stand there on table*

The structural difference between (48b) and (49) is that exclamatives do not require A-movement (Predicate Inversion); A'-movement alone (Predicate Fronting) is sufficient to derive (49). In this respect (49) patterns with (48a). On the other hand, the unacceptability of (48b) patterns with the unacceptability of (50).

23 As one of the reviewers noticed, (47d) is better than (47c). This might be the result of an across the board application of movement of *een*. Starting with a construction that would normally give rise to (47b), an across the board application of *een* movement would result in (47d).
(50)  *Dat zijn schatten van een drie kinderen
       that are darlings of a three children

The generalisation appears to be that DP-internal A-movement does not allow the appearance of numerals whereas numerals can co-occur with DP-internal A'-movement. The facts in (48)–(50) thus directly corroborate the dual analysis of the wat voor construction.

Another argument concerns the interpretation of wat voor constructions. We have proposed that wat voor constructions are in principle structurally ambiguous between the two structures in (40), which differ with regard to the presence or absence of semantic and morphosyntactic features under X. This difference is not semantically innocuous. There is a corresponding but very subtle difference between the interpretation of (51a) and (51b).

(51) a. Wat voor jongens zijn dat?
       what for boys are that

b. Wat voor een jongens zijn dat?
       what for a boys are that

According to most speakers of Dutch (51a) is ambiguous between a type interpretation of the preposed DP and a set interpretation. These two options can be paraphrased by the questions what kind of boys and, somewhat less naturally, which boys. The answer to a question such as (51a) can thus be either something like nice boys, or something like Tom, Dick, and Harry. However, the spurious een variants can receive answers only of the type nice boys. Although it is not immediately obvious how the difference in interpretation can be directly related to the structural difference, the fact that there are two interpretations may support the dual analysis of this construction.

Support for the interpretive distinction made above comes from negative island effects. It has been observed that negation has an effect on the possibility of split wat voor constructions, as in (52) (cf. Corver 1991; Honcooop 1995, 1996).

(52) a. Wat voor boeken heb jij (niet) gelezen?
       what for books have you not read

b. Wat heb jij (*niet) voor boeken gelezen?
       what have you not for books read

The unacceptability of the negative variant of (52b) is due to an intervention effect on the relation between the quantifier (wat) and the indefinite DP (voor boeken) that is the consequence of the intervening negation. A somewhat different though related contrast occurs in the examples in (53).24

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24 We thank Martin Honcooop for discussing this issue with us.
(53) a. Wat voor boeken heb jij niet gelezen?
what for books have you not read
b. ?Wat voor een boeken heb jij niet gelezen?

The presence of the negation forces the fronted *wat voor* phrase to be interpreted as specific as a consequence of the fact that the negation blocks an interpretation under existential closure. This intervention effect interacts with the interpretational difference between *wat voor een* and *wat voor* phrases, which was discussed above. The required type interpretation of *wat voor een* is rather unnatural in negative environments. To answer (53b) it is required that there is a special situation/context in which different kinds of books are presupposed. On the other hand, (53a) is perfectly natural under a set interpretation. The natural answer to (53a) concerns a specific set of books. This interpretation is clearly not available in (53b).

8. Conclusions

After the detailed discussion of a number of apparently unrelated nominal constructions, we have reached a level of abstractness that allows us to draw several conclusions, both with respect to the symmetry between nominal and verbal projections and, more generally, with respect to the properties of a theory that allows us to develop analyses such as the ones we have presented.

From an interpretive point of view the leading issue in this paper has been the existence of predication in the nominal domain, in a way that is quite similar to predication in the clausal domain. We have demonstrated that an analysis of predication in a configurational way, such that the subject and predicate together constitute a small clause, allows us to provide detailed analyses of complex nominal constructions involving predication.

In line with recent developments we adopt the idea that functional or grammatical information is present in functional projections. Another aspect of symmetry thus concerns the fact that the nature of these functional projections in the nominal domain is not significantly different from that of functional projections in the clausal domain. For instance, we have argued that copular elements and complementisers are not peculiar to the clausal domain but that copulas and complementisers are found in the nominal domain as well.

Moreover, we have shown that Predicate Movement, an operation that is well studied and well motivated in the clausal domain, can also be found in the nominal domain. As in full clauses, the leftward movement of predicates can be either A-movement or A'-movement. (A-movement of predicates across their subjects is called Predicate Inversion, and we have labelled the A'-movement of predicates as Predicate Fronting.)
In studying nominal predication structures we have discovered one important asymmetry between the nominal and the clausal domains. It concerns the presence of so-called spurious *een*, which is typical for constructions with Predicate Movement within DP. We have found this fascinating element to be present both in Predicate Inversion and in Predicate Fronting constructions. We have argued that *een* originates as the functional head X of a small clause. In Predicate Inversion *een* is moved from its base position to a functional projection above the SC in order to create a domain which is sufficiently large for Predicate Inversion to take place without violating locality conditions. In Predicate Fronting we have come across spurious *een* in *wat*-exclamative constructions, its presence being forced there to lexicalise the feature [+EXCL] for reasons of visibility. Throughout, the distribution of *een* has served as an important heuristic tool to discover the range of constructions with DP-internal Predication.

Our study has also provided evidence in favour of both Chomskyan Minimalism (Chomsky 1995) and Kaynean Antisymmetry (1994), albeit in a more indirect way. We have made crucial use of the (original, 1993) minimalist locality theory, showing that long A-movement is dependent on short head movement. And although no explicit use has been made of Kayne's theory of Antisymmetry, it should be clear that our approach is quite similar in spirit to the one presented in Kayne's recent work. Moreover, all the structures we have presented were in line with his generalised Spec-Head-Complement structure.

In this paper we have not discussed the different DP-internal predication constructions from a comparative point of view. The complexity and the subtle nature of the data has forced us to concentrate first on one language, our own. And even for Dutch the array of facts presented in these pages by no means exhausts the set of relevant DP constructions. In forthcoming work we will demonstrate that our approach has interesting consequences for other constructions – in particular the various constructions containing the predicates zo 'so' and zulk(e) 'such' will turn out to be relevant in this respect – and other languages as well.

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