CP complements to D

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Abstract

Despite their apparent simplicity, the structure of DPs containing “complement” CPs (what we will call DCs) has long been obscure. One major strand of investigation has attempted to assimilate DCs to (close) nominal apposition, implying that N and CP form a structural unit which then combines with D.

Danish has two kinds of DCs, a bare DC with the superficial structure [D N CP] and a prepositional DC in which the CP is encased in a PP. Exploiting clues provided by the allomorphy of the definite morpheme, we argue that the bare and prepositional DCs have very different structures, neither of which can be assimilated to apposition between N and CP.

We show that the two kinds of DC have different semantic/pragmatic properties, the bare DCs being referent-establishing in the sense of Hawkins (1978) and the (definite) prepositional DC being anaphoric.

We then argue that English also has different structures for anaphoric and referent-establishing DCs, and that they are plausibly parallel to the structures we establish for Danish. We conclude by arguing that if the structure of any DCs in English is to be assimilated to apposition, it must be apposition between DP and CP.

Keywords: DP internal structure, clausal complements, definiteness, Danish, apposition, selection
1 Introduction

We are concerned with the analysis of constructions like (1), where a DP is composed of a
determiner, an abstract noun, and a CP:

(1) the idea [that ginger aids digestion]

We will call such constructions DCs, remaining for the moment neutral about their internal
structure.

In early transformational grammar, it was generally assumed that the CP is a sis-
ter (thus a complement, in structural terms) of the N (Rosenbaum 1967:3–5; Chomsky
1970:195; Kiparsky and Kiparsky 1970:157; Stockwell et al. 1973:508 a.o.; see also Hud-
dleston and Pullum 2002:439). Since at least Stowell (1981), however, various objections
have been raised against this (let us call it traditional) analysis, and accordingly several
alternative analyses have been proposed. We will not review all of them here, but just to
give a sense of the variety, here are a few prominent ones.

Stowell (1981) suggests that the relation between the CP and the N is one of “appo-
sition” (though he does not say what structure that would entail). Grimshaw (1990:71,
73) says that Ns can never take CP “arguments”, by which she apparently means what we
mean by “complement”. Moulton (2015), while it is very difficult to discern what syntactic
structure he assumes, suggests (p. 313) that the (finite) CP and the noun compose by
Intensional Predicate Modification, which ought to mean that the CP is an adjunct (or
an appositive). Kayne (2010:212-215) proposes that the CP in a DC is a covert relative
clause, an idea also pursued by Arsenijević (2009), Haegeman and Ürógdi (2010:132-134)
these covert relative clause analyses, but himself remains carefully agnostic about whether

\footnote{The noun may in general be modified, but we will mostly ignore that.}
such CPs are adjuncts or complements (p. 40).²

What seems to be driving all of these proposed alternatives to the standard analysis is a general sense that the semantic relation between the N and the CP is not that between a normal lexical head and its complement. There is no sense in which idea in (1) assigns a Θ-role to the CP (or to anything, for that matter). As Stowell (1981:200) points out, in a DC like (2) “claim refers to the thing which is claimed, rather than the act of claiming”.

(2) John’s claim that he would win

And indeed, the works cited present lots of evidence of various kinds that DCs behave differently in many ways from the corresponding verbal constructions. Stowell goes on to declare that “…the derived nominal heads actually refer to the same thing that their ‘complements’ do: the object argument of the verb. The relation between the derived nominal and its ‘complement’ is actually one of apposition, rather than of Θ-role assignment.”

This sentiment, along with its category mistake, is repeated in slightly varying forms throughout the literature cited above (see fn. 15). We will have more to say in section 3.1 about the difficulties confronting any attempt to put actual syntactic flesh on an appositive analysis. Stowell does not appear to have tried to do that.

In this paper we investigate the properties of two kinds of DCs in Danish. Because Danish has two DC constructions and useful morphosyntactic diagnostics that do not exist in English, this investigation sheds useful light on the relation between N and CP in a DC. The authors of the works cited above struggled to characterize the structure of DCs, especially the relation between the N and the CP. Our investigation leads to the conclusion

²All the authors cited here are very interested in differences among the various kinds of CP-taking Ns, and in differences in behavior between finite and non-finite CPs. With the exception of the semantic distinctions drawn in section 2.2, we are not interested in any of those things, since the properties of the construction that we are investigating do not seem to vary along those dimensions (Mikkelsen 1998:46).
that there are two structures for DCs and that $\bar{X}$-theory of the standard kind provides the appropriate structures. We don’t need anything particularly mysterious or fancy. We will agree with all of these authors that in neither DC structure is the CP a complement of the N. We will in fact argue that in one structure the CP is a complement to the D, in the other the CP is adjoined to DP.

The first type of DC we consider involves an abstract head noun followed by a CP, parallel to the English example in (3):

(3) den ide at ingefær gavner fordøjels-en
    the idea that ginger aids digestion

Danish has another kind of DC, in which the N is not followed directly by a CP, but a preposition intervenes between the noun and the CP:

(4) en ide om at ingefær gavner fordøjels-en
    a idea about that ginger aids digestion

(5) ide-en om at ingefær gavner fordøjels-en
    the idea that ginger aids digestion

The two kinds of DCs interact differently with definiteness marking. When D=[Def], the definite morpheme, the bare DC invariably uses the prenominal article, whereas the prepositional DC, as seen in (5), uses the suffixed form (unless the presence of an attributive adjective forces the prenominal article).\footnote{We have found very little discussion of DCs in the otherwise extensive literature on Scandinavian DP structure. Mikkelsen (1998:45–46, 90–98, 130–132) provides the results of a corpus study and an HPSG}

\footnote{We use the following abbreviations in the glosses: def = definite, expl = expletive, pass = passive.}
While perhaps puzzling from an English perspective, the existence and behavior of the prepositional DC is in fact entirely expected from the point of view of Danish syntax, as we show in section 2.4. It is the bare DC in (3) that is the real challenge, as we shall see in section 3. The main purpose of this paper is to develop an analysis of the bare DC that is compatible with the other aspects of Danish syntax and explains its characteristic properties. We first establish, in section 2, that the two DCs differ not only in morphosyntactic properties but also in (a) the head nouns they allow and (b) the semantic/pragmatic status of the DC. We then present a syntactic analysis (section 3) that resolves the difficulties and provides an explanation for the clustering of morphological, syntactic, and semantic properties of the two DCs. We then argue, in section 4, that the analysis we are driven to by the requirements of Danish morphology and syntax leads to a

analysis; Hankamer and Mikkelsen (2018:70-72) discuss DCs briefly and adopt the traditional analysis of CP as a complement to N. We know of no articles devoted to their study nor are they discussed in Börjars (1998), Delsing (1993), and Julien (2005), three monographs on Scandinavian DP structure. In their descriptive grammar, Hansen and Heltoft (2011:1509–1512) briefly discuss the Danish constructions and their characterization of the data accords with ours, with two exceptions. First, Hansen and Heltoft characterize the use of the prepositional DC with the suffixed definite article as a strong tendency, where we consider it a grammatical requirement. Second, Hansen and Heltoft assume that some DCs of the form in (3) involve the demonstrative determiner den, and not the definite article den, whereas we believe that den in the bare DC is uniformly the definite article. We are not in a position to settle the matter empirically here, but our general approach is compatible with either outcome, since, under our analysis of the bare DC, participation in the bare DC is determined by selection on the part of individual determiners. Only determiners that select for a CP occur in the bare DC. Our current position is that the definite article is alone in selecting for a CP, but should it turn out that the demonstrative determiner occurs in the bare DC as well, our analysis could be modified to allow for that simply by changing the lexical specification of the demonstrative determiner. Finally we note that comparison of Danish to descriptions of Norwegian (Faarlund et al. 1997:272–274) and Swedish (Teleman et al. 1999:42, 95, 103, 121–8) suggests that DCs form another area of complex variation among the mainland Scandinavian languages.
way of understanding the structure of DCs in general which we can extend quite naturally to English, providing a more satisfactory account than any of those cited at the beginning of this introduction.

2 Danish DCs

To repeat, Danish has two kinds of DCs:

(6) den ide at ingefær gavner fordøjels-en
    the idea that ginger aids digestion

(7) ide-en om at ingefær gavner fordøjels-en
    the idea about that ginger aids digestion

The two kinds of DC are not in free variation. A striking difference is that the bare DC is possible only with the definite article;\(^5\) indefinite, possessive, and demonstrative determiners require the prepositional DC, as (8) shows.\(^6\)

(8) en/hans/denne ide *(om) at ingefær gavner fordøjels-en
    a/his/this idea about that ginger aids digestion

\(^5\)There are several elements which we may regard as belonging to the category D in Danish and as being “definite” in some sense, including the possessive morpheme and the demonstratives, but there is one very special one which we will call D[DEF] and which may be regarded as purely marking definiteness and nothing else. D[DEF] has an interesting and well-studied allomorphy (see e.g. Delsing 1993, Embick and Noyer 2001:580-584, Julien 2005, Hankamer and Mikkelsen 2002, 2005, 2008, 2018), in which it sometimes surfaces as a free-standing article and sometimes as a suffix on the head noun of its associated NP. In our analysis of the bare DC (section 3), we will rely on the analysis of the allomorphy of D[DEF] developed in Hankamer and Mikkelsen (2005, 2008, 2018).

\(^6\)Strings like those in (8) do occur, as shown in the grammatical examples below.
We take this to be a case of category-selection: D[def] may select a CP (or an NP), whereas all other Ds select only NP.

In addition, the form taken by D[DEF] in a bare DC is invariably the free-standing article, never the suffixed form:

(9) *ide-en at ingefær gavner forðøjels-en
    idea-DEF that ginger aids digestion-DEF

On the other hand, a prepositional DC can be headed by D[DEF] but (unless there is an adjective present, as in (62) in section 3.2) the form of the D must be suffixal: 7

(10) ide-en om at ingefær gavner forðøjels-en
    idea-DEF about that ginger aids digestion-DEF
    the idea that ginger aids digestion

(11) *den ide om at ingefær gavner forðøjels-en
    DEF idea about that ginger aids digestion-DEF

These facts can be summarized as follows:

a. The bare DC must be headed by the definite determiner D[DEF].

i. Det var [DP hans ide] [CP at vi skulle putte ingefær i suppen].
   it was his idea that we should put ginger in soup-DEF
   It was his idea that we should put ginger in the soup.

ii. Det er [DP en kendsgerning] [CP at ingefær gavner forðøjels-en].
    it is a fact that ginger aids digestion-DEF
    It is a fact that ginger aids digestion.

But here the CP does not form a constituent with the preceding DP. Rather these are extraposition structures, just like their English counterparts, and do not involve DCs. Consequently, the grammaticality of (i) and (ii) does not bear on our claim that bare DCs allow only the definite article.

7(11) is grammatical if den is stressed, but then den is unambiguously a demonstrative D, not a definite article.
b. The form of D[DEF] in the bare DC is always the free-standing article.

c. The propositional DC can be headed by any D, including D[DEF].

d. The form of D[DEF] in the prepositional DC, in the absence of an intervening adjective, is suffixal.

2.1 On the meaning and use of DCs

In addition to the morphosyntactic differences established above, the definite versions of the two DC constructions contrast in meaning and use. Like prototypical definite DPs, a definite prepositional DC presupposes the existence of a referent for the DP, as can be shown for (12).

(12) De har overholdt [aftalen om at biblioteker-ne skal finansiere-s via brugerbetaling].

They have kept the agreement that libraries must be financed by the users.

To evaluate the truth of (12) an agreement that library users pay to use the library must have been made. If (12) is negated, as in (13), this is still the case, showing that this is a presupposition, as opposed to an entailment. If no such agreement has been made, (12) and (13) cannot be assigned a truth value.

(13) De har ikke overholdt aftalen om at biblioteker-ne skal finansiere-s via brugerbetaling.

They have not kept the agreement that libraries must be financed by the users.
In contrast a definite bare DC like (14) does not presuppose the existence of a referent; it asserts it.

(14) De har lavet den aftale at biblioteker-ne skal finansiere-s via brugerbetaling.

They have made the agreement that libraries must be financed via user payment.

If there is no agreement about library user payment, (14) is false, not truth-valueless or uninterpretable. The negation of (14), given in (15), does not presuppose any such agreement either, in fact it denies it.

(15) De har ikke lavet den aftale at biblioteker-ne skal finansiere-s via brugerbetaling.

They have not made the agreement that libraries must be financed via user payment.

This difference between definite prepositional DCs and definite bare DCs is reflected in their distribution. A search for definite DCs with the noun aftale ‘agreement’ in Korpus DK reveals the distribution in (16).\footnote{Korpus DK is the main corpus of contemporary Danish. It contains 56 million words from a variety of genres and is publicly accessible at http://ordnet.dk/korpusdk.}
(16) Distribution of definite DCs with the noun aftale in Korpus DK

a. Definite prepositional DC occurs as
   i. object of predicates like overholde ‘keep’, være uenig i ‘disagree with’,
      opsige ‘cancel’, undertegne ‘sign’, være med i ‘be part of’; and
   ii. subject of predicates like være kommet i stand ‘be established’, holde
      ‘last’, få tilslutning ‘get support’, blive effektueret ‘be implemented’,
      blive aflyst ‘be cancelled’, blive betegnet som ‘be characterized as’, være
      præget af ‘be influenced by’, være uvantagelig ‘be unacceptable’.

b. Definite bare DC occurs as
   i. object of predicates like have ‘have’, lave ‘make’, få ‘get, reach’, indgå
      ‘enter into’, skilles med ‘seperate with’, give håndslag på ‘shake hands
      on’
   ii. only one attested subject use, with the verb indgå ‘be included in’

The predicates in (16ai) support a presuppositional semantics for the definite prepositional DC: one can only cancel, keep or disagree with an agreement if that agreement already exists. Similarly for the predicates in (16a(ii)): only existing agreements can be cancelled, supported or deemed unacceptable. In contrast, several of the predicates in (16bi) are at odds with a presuppositional semantics: one cannot make or reach an agreement that already exists. Similarly, if an agreement is confirmed by shaking hands, as is traditionally the case in Danish transactions, then the agreement does not exist prior to the handshake.

We propose that the meaning difference between definite prepositional DCs and bare DCs falls under Hawkins’ (1978:130–149) distinction between anaphoric and referent-establishing definites. Specifically, definite prepositional DCs are anaphoric whereas bare
DCs are referent establishing.\(^9\)

Hawkins notes (p. 140) that certain definite nominal phrases containing CP complements can be referent-establishing, in the sense that no prior reference is required, though without the CP the nominal would be illicit without a prior reference being established. For instance, *Bill is amazed by the fact that there is so much life on earth* is licit without any prior mention of this fact, whereas *Bill is amazed by the fact* is not. We suggest that such referent-establishing definites do not carry the usual existence and uniqueness presuppositions, but rather establish the existence of a particular fact whose propositional content is expressed by the CP.

More recently, Schwarz (2009) argues that there are two types of definite noun phrases associated with two related but distinct meanings for the definite article: a weak definite article that encodes uniqueness and a strong definite article that in addition to the uniqueness requirement carries an anaphoric index. While Schwarz organizes his discussion around Hawkins’ classification of uses of the definite article, it seems to us that Schwarz’ distinction between weak and strong definites does not straightforwardly map onto referent-establishing vs. anaphoric definites. In particular, Schwarz’ weak definites carry a uniqueness presupposition (albeit relativized to situations; pp. 143–154), whereas it seems odd to say that referent-establishing definites presuppose the uniqueness of their referent, if they function to establish the referent. As discussed above, Danish definite bare DCs do not carry presuppositions of existence or uniqueness and as such cannot be straightforwardly

\(^9\)Hawkins uses the term “referent-establishing” only for first-mention definites containing a restrictive relative clause; here we extend it to DCs, which he refers to simply as a class of “first-mention uses of the definite article that is made possible by following modifiers” (p. 140). His other classes of first-mention definites are Associative Clauses, e.g. *the beginning of the war* where a beginning has not been previously mentioned, and Nominal Modifiers (aka nominal close apposition), e.g. *the number seven* where a number has not been previously mentioned. We return briefly to close apposition in the conclusion.
analyzed as weak or strong definites in Schwarz’ terms. Thus we choose to frame our characterization of the bare DC and definite prepositional DC in Hawkins’ (1978) terms.\textsuperscript{10}

2.2 Restrictions on N

In this section we turn to the nouns that occur in the two DC constructions and show that there is a principled semantic difference in the range of nouns allowed in the two construction.

We will use the term \textit{propositional noun} for a noun that, in some intuitive sense, labels a proposition.\textsuperscript{11} Such nouns are characterized by being able to occur in the copula constructions in (17)–(19):

\begin{enumerate}
\item (17) The/my N is CP.
  \begin{enumerate}
  \item The fact is that everyone participated.
  \item My hope is that everyone participates.
  \end{enumerate}
\item (18) It is a/my N CP. (cf. fn. 6)
  \begin{enumerate}
  \item It is a fact that everyone participated.
  \item It is my hope that everyone participates.
  \end{enumerate}
\item (19) CP is a/my N.
\end{enumerate}

\textsuperscript{10}Schwarz (2009) does not analyze DCs, but does observe (p. 70) that German DCs, which take the form D N CP, allow either the weak or the strong definite article. He further notes that it is “possible . . . that . . . there are differences in use conditions for the two forms” though he does not explore these possible differences.

\textsuperscript{11}We have not been able to locate much discussion of these nouns in the formal semantics literature. Some of them are discussed, under a variety of labels, in the work of Asher (1993), Moltmann (2003a, 2003b), Moulton (2015), and Pryor (2007).
a. That everyone participated is a fact.

b. That everyone participates is my (biggest) hope.

Among propositional nouns, we distinguish three types:


(22) **Non-representational** nouns: categorize propositions relative to some pur-
pose or standard without connecting them to a mental state or linguistic act, e.g. 
\textit{virkning} ‘effect’.

The first two types are united in being representational, whereas the third type is non-representational. These distinctions are summarized in the taxonomy in (23):

(23)

\begin{center}
\begin{tikzpicture}
  \node (a) {propositional};
  \node[below of=a] (b) {representational non-representational};
  \node[below left of=b] (c) {attitude};
  \node[below right of=b] (d) {speech act};
  \draw[->] (a) -- (b);
  \draw[->] (b) -- (c);
  \draw[->] (b) -- (d);
\end{tikzpicture}
\end{center}

With this terminology in place we can make the observation that the bare DC is possible with all three types of propositional nouns (24), whereas the prepositional DC is possible only with representational nouns (25).

(24) a. det \textit{håb} at alle deltager [attitude N] 
the hope that everyone participates

b. det \textit{krav} at alle deltager [speech act N] 
the demand that everyone participates

c. den \textit{kendsgerning} at alle deltager [non-representational N] 
the fact that everyone participates

d. den \textit{triumf} at alle deltager [non-representational N] 
the triumph that everyone participates

\textit{the hope/demand/fact/triumph that everyone participates}
Neither, of course, is compatible with a non-propositional noun:

(26) #det pindsvin at alle elsker små pattedyr [non-propositional N]
    the hedgehog that everyone loves small mammals

(27) #pindsvin-et om at alle elsker små pattedyr [non-propositional N]
    hedgehog-DEF about that everyone loves small mammals

The contrast between (24) and (25) suggests that the semantic relation between N and CP is different in the two DCs. Mikkelsen (2014), building on Pryor (2007) and Davies and Dubinsky (2003:12–14), suggests that in the bare DC the N has a sortal interpretation and simply characterizes the CP, where as in the prepositional DC, the N has a relational interpretation, in which the noun designates an attitude towards, or a linguistic representation of, the state-of-affairs expressed by the CP. We will adopt Mikkelsen’s semantic characterization here, and propose syntactic structures for the bare and prepositional DC that support it.\footnote{12}
This concludes our examination of Danish DC constructions. Before we present our analysis of each of them, we need to lay out the basic facts about definiteness marking in Danish.

2.3 Danish definiteness markers

As noted above, Danish has two ways of marking definiteness: a suffix on the head noun and a prenominal article. The two are in complementary distribution and both show gender (neuter vs. common) and number (singular vs. plural) distinctions. Here we use the singular common gender forms -en and den for illustration, but the pattern is the same with neuters and plurals.

First, unmodified DPs require the definite suffix:

(28) film-en
    film-DEF
    the film

(29) *den film
    DEF film

In contrast, DPs with a prenominal adjective require the definite article:

(30) *nye film-en
    new film-DEF

(31) den nye film
    DEF new film
    the new film

Postnominal PPs license the definite suffix (32), but occur with the definite article if the article is required by another element, such as a prenominal adjective (33).
Hankamer and Mikkelsen (2005, 2008, 2018) analyse this pattern as in (34):

(34) a. -en is found when D[DEF] is sister of a minimal NP (i.e. NP consisting solely of N)

b. den is found elsewhere

In unmodified DPs, D[DEF] is a sister to a minimal NP, so the definite suffix is used (35).
In DPs with adjectival modification, the NP sister of D[DEF] is not minimal—it contains an AP—and thus the definite article is used (36).

(35) \[
\begin{array}{c}
\text{DP} \\
\text{D} \quad \text{NP} \\
\text{-en} \quad \text{film}
\end{array}
\]

(36) \[
\begin{array}{c}
\text{DP} \\
\text{D} \quad \text{NP} \\
\text{den} \quad \text{AP} \quad \text{NP} \\
\text{belgiske} \quad \text{film}
\end{array}
\]
As illustrated in (37), we assume that PPs adjoin to DP (Hankamer and Mikkelsen 2005:111-113, 118; 2008:326–327, 2018:65–66, 73, Julien 2005:67–69). This leaves NP as a minimal sister to D[DEF], resulting in D[DEF] being spelled out as the definite article in (32)/(37):

(37)

\[
\begin{array}{c}
\text{DP} \\
\text{DP} & \text{PP} \\
D & \text{NP} & P & \text{NP} \\
\text{-en} & \text{film} & \text{fra} & \text{Belgien}
\end{array}
\]

If an AP is added, as in (33), the NP is no longer minimal and the definite article must be used:

(38)

\[
\begin{array}{c}
\text{DP} \\
\text{DP} & \text{PP} \\
D & \text{NP} & P & \text{NP} \\
\text{den} & \text{AP} & \text{N} & \text{fra} & \text{Belgien} \\
\text{nye} & \text{film}
\end{array}
\]

In the next section we extend this line of analysis to the prepositional DC.

2.4 The structure of prepositional DCs

Whereas the complement of English prepositions is restricted to DPs (Emonds 1970:100, Stowell 1981:149, Grimshaw 1990:78, Legate 2010:122-125), Danish prepositions may take either CP or DP complements. The examples below show this for the prepositions *af* (of), *med* (with), *på* (on) and *om* (about).
a. Alle er kede [PP af [CP at hun er blevet fyret]].
Everyone is sorry of that she is become fired
Everyone is sorry that she was fired.

b. Alle er kede [PP af [DP den her situation]].
everyone is sorry of this here situation
Everyone is sorry about this situation.

a. Vi regner [PP med [CP at de kommer i næste uge]].
we count with that they come in next week
We expect that they are coming next week.

b. Vi regner [PP med [DP mange flere deltagere i år]].
we count with many more participants in year
We expect many more people next year.

a. Jeg tror [PP på [CP at mine sange opbygger mod-et i folk]].
I believe on that my songs up.build courage-DEF in people
I believe that my songs build courage in people.

b. Jeg tror [PP på [DP ham]].
I believe on him
I believe in him. or I believe him.

a. De er enige [PP om [CP at han skal flytte]].
they are in.agreement about that he must move
They all agree that he needs to move.

b. De er enige [PP om [DP financiering-en]].
they are in.agreement about financing-DEF
They agree on the financing.

The a.-examples above all involve the schematic structure in (43), where the predicate (A or V) takes a PP complement, whose head in turn takes a CP complement.
Putting this together with the assumption from the previous section that PPs adjoin to DP in nominal structures, we arrive at the structure in (44) for prepositional DCs.\(^{13}\)

This structure places no special restrictions on D, which meshes with the observation that not just definite D, but also indefinite, possessive and demonstrative Ds are possible in the prepositional DC (see (8)). Furthermore, D is a sister to a minimal N, and thus realized as a suffix on N when definite.

This concludes our analysis of the prepositional DC and we turn now to the more mysterious bare DC.

3 The structure of the bare DC

An example of the bare DC construction is repeated in (45):

---

\(^{13}\)Most nouns occur with the preposition *om* in the prepositional DC, but a small set of nouns select for different prepositions, as in *risiko for* at ‘risk for that’, *tro på* at ‘belief in that’, *initiativ til* at ‘initiative to that’. See Mikkelsen (1998:130–132) for illustrative data and Merchant (2018) for recent discussion of lexical-selection of prepositions.
In this construction there are three pieces (D, NP, and CP) and three things that need to be accounted for:

a. The order is D NP CP.

b. Definiteness is realized as an independent article, not as a suffix.

c. There is selection between D and CP and between D and NP.

Evidence for selection between D and CP comes from the fact that only D[DEF] occurs in the bare DC (see section 2). Evidence that D also selects NP comes from the pattern in (46):

(46) De foreslog

they proposed

a. den hypotese at ingefær gavner fordojels-en.

the hypothesis that ginger aids digestion-DEF

b. *hypotese at ingefær gavner fordojels-en.

hypothesis that ginger aids digestion-DEF

c. at ingefær gavner fordojels-en.

that ginger aids digestion-DEF

NP can only be present if D is present, as shown by the ungrammaticality of (46b). That is, D selects NP.

In section 3.1 we consider some candidate analyses for (45) and show that they won’t work; in particular they all have trouble accounting for the selection between D and CP.
In section 3.2 we develop an analysis; in section 3.3 we show how this analysis accounts for the characteristic properties of bare DCs, including selection of CP by D and prenominal definiteness marking; in section 3.4 we extend the analysis to DCs that have no N.

### 3.1 Some analyses that don’t work

Perhaps the most obvious analysis to consider is the one we characterized in the introduction as the “traditional” analysis, where the CP is a complement to N, as in (47).

\[(47)\]
\[
\text{DP} \quad \text{NP} \\
\text{D} \quad \text{N} \\
\text{den} \quad \text{ide} \quad \text{at \ldots fordøjels-en} \\
\]

This will get the pieces in the right order (a), and will make the right predictions about definiteness marking (b), but would leave the selection of CP by D[DEF] (c) mysterious.

For similar reasons, an analysis in which the CP is adjoined to NP can be rejected:

\[(48)\]
\[
\text{DP} \quad \text{NP} \\
\text{D} \quad \text{NP} \\
\text{den} \quad \text{ide} \\
\text{N} \quad \text{at \ldots fordøjels-en} \\
\]

Again, while the order is derived straightforwardly, and the expected definiteness marking would be the prenominal article, as observed, again it would be mysterious that the D[DEF] selects the CP.

Obviously, any analysis that involves first combining D and NP to form a DP, which then combines (perhaps by apposition) with the CP, as in
Let us consider how these syntactic analyses relate to the proposals in the literature about DCs. One major strand, represented by Stowell (1981), Grimshaw (1990), Moulton (2015), and de Cuba (2017), agrees in rejecting the traditional analysis (47) where the CP is a complement to N, and suggests (to varying degrees of inexplicitness) something like (48) or (49). Consider Stowell (1981:200):

14 Yet another approach would be to propose a ternary-branching structure, in which D takes an NP complement and a CP complement. This would get the word order (by stipulation or by a presumed heaviness-to-the-right preference). It would allow D to select both NP and CP. But it would not account for the nature of the definiteness marking, since D[def] is a sister to a minimal NP wrongly predicting suffixal definiteness marking.

15 Our primary concern here is the syntactic structure implied in Stowell’s description, but we can’t pass by without remarking on what looks to us like a serious semantic sloppiness. It cannot be that the derived nominal head refers to the same thing as the CP. Nouns don’t refer to anything, at best they denote classes, and certainly they don’t denote the kind of thing that a CP denotes. This mistake is propagated throughout the subsequent literature. For example, Moulton (2015:312) says: “content nouns like myth, story, and rumor . . . denote individuals, but of a special sort.” Of course these Ns don’t denote individuals. and Moulton’s representation of the denotation of idea ((18) [idea] = \lambda x_c \lambda w . idea(x_c)(w), p. 312) reveals that he doesn’t really mean it (unless “individual” has come to mean something entirely different from what we think it means).

Similarly, de Cuba (2017:30): “…NCCs [CPs in a DCs] always have an antecedent in the discourse, unlike VCCs [CP complements to V]. In other words, the content noun (claim, fact, etc) and its associated CP refers to the same entity.”
plements” do: the object argument of the verb. The relation between the derived nominal and its “complement” is actually one of apposition, rather than of Θ-role assignment.

Stowell does not provide any structural representation, so we have to guess what he had in mind when he said the relation between the N and the CP is one of “apposition”. He is clearly rejecting a structure like (47), so we assume he must have in mind something like (48). As we have seen, a structure like (48) cannot be maintained for Danish bare DCs, because there is no way to account for the selection we observe between D and the CP.16 English does not appear to exhibit this selection. In section 4, however, we will argue that a closer inspection of the behavior of English DCs reveals that the same sort of selection obtains in English too, though it is not so clearly illuminated by the morphosyntax.

Moulton (2015) and de Cuba (2017) follow Stowell in failing to be very explicit about the structure of DCs while repeating the assertion that the noun and the CP co-refer. This intuition (which we believe is mistaken17) seems to have led them to the conclusion that the N and the CP in a DC combine first (though not in the same way as a head and its complement usually combine) and then this unit combines with the D. Returning to Danish, we have seen that this structural assumption gives wrong results for both bare

16Stowell, of course, does not make a distinction between English constructions corresponding to Danish bare DCs and English constructions corresponding to Danish prepositional DCs, but the examples he cites (p. 199) in connection with his discussion (Andrea’s guess that Bill was lying, John’s claim that he would win, Paul’s explanation that he was temporarily insane) look like they would correspond to the prepositional DCs, in that they feature a possessive D. Later authors (e.g. Moulton 2015, de Cuba 2017) say very similar things about examples that appear to correspond to Danish bare DCs.

17Moulton (2015:311-313) offers an empirical argument for the noun and the CP having the same semantic type that is based on copular clauses. However, as far as we can tell, the argument is based on an equivocation of equative and predicational copula clauses and therefore does not go through. Thanks to John MacFarlane, Keith Moulton, Ethan Nowak for helpful discussion of this issue.
and prepositional DCs. It cannot be the structure for prepositional DCs because it would get the definiteness marking wrong. It cannot be the structure for bare DCs because there would be no way for D to select the CP.

3.2 A head raising analysis

In the nearly workable analyses that we have rejected, the difficulty is the double selection: the D[DEF] clearly selects the CP, since no other D permits a CP; at the same time D also selects for NP (see (46). Another place where such a problem appears is in the case of ditransitive verbs (Larson, 1988):

(50) I showed Harvey the photos.

Note that here too there is apparent double selection by a head (the ditransitive V) with both selected elements following the head, as it if had two complements. A commonly accepted solution (following Larson (1988); see Harley and Miyagawa (2017) and references cited there) is to posit a little v shell containing the VP structure, in which one of the DP arguments is a complement to V and the other a specifier:

(51) \[
\begin{array}{c}
\text{vP} \\
\text{v} \\
\text{VP} \\
\text{DP} \quad \text{V'} \\
\text{V} \quad \text{DP}
\end{array}
\]

The order V-DP-DP is then derived by an assumed Head-Raising of V to v.

Taking inspiration from this, and from later unpublished work by Larson (Larson, 1991), we suggest a parallel analysis for bare DCs, with an underlying structure in which D[DEF] takes a CP complement directly and an NP specifier:
In such a structure it is not at all mysterious why D[def] can select for a CP complement, and also have selection effects on its NP specifier. This structure is then assumed to be a complement to a functional head (call it d), to which D raises by Head Movement.\footnote{Given the structure proposed, one might ask whether we can find arguments supporting the proposed c-command relations, like those in Barss and Lasnik (1986), which support the V-shell structure. Unfortunately, we cannot at present. The Barss-Lasnik diagnostics all involved relations between DPs, and we don’t have a similarly broad variety of diagnostics for relations between NPs and CPs.}

\begin{equation}
(52)
\begin{array}{c}
\text{DP} \\
\text{NP} \quad \text{D'} \\
\quad \text{D} \quad \text{CP}
\end{array}
\end{equation}

3.3 How this makes sense of everything

First, the order D NP CP is accounted for (a bit less straightforwardly than in the rejected analyses (CP complement of N, CP right-joined to NP or to DP) by the raising of D to a higher head position, where it ends up to the left of its specifier as well as its complement.

The realization of D[def] as the prenominal article is predicted under this analysis because the D and N are never in direct construction with each other, and thus D is never a sister of a minimal N.

Thirdly, the selection relations are accounted for. D[def] can select a CP complement (unlike any other D) and can also exert selection over its specifier, via head-specifier selection.
In connection with this last part, we also have an extra bit of support for the assumption that CP merges first, and then NP. The selection of CP is different from the selection of NP in two significant ways. The selection of CP by D[DEF] is an instance of strict subcategorization: of all Ds, only D[DEF] can select a bare CP in construction with it at all. The selection of the head NP is, on the other hand, not a property of the D[DEF] alone (any D can occur with all those Ns); it is the combination of D[DEF] + CP that sanctions the set of Ns that can appear in this construction (the bare DC), but not in the prepositional DC construction (see list in 25–35 in section 2.2). This situation is precisely a case of asymmetric predicate-argument structures (Marantz 1984:27), where the selection of the specifier is a property not of the head alone, but of the head + complement combination.

Note that this gives us a principled account of the word order that the ternary-branching structure mentioned in footnote 14 lacks. These considerations in fact count as an additional argument against any analysis that involves combining D+NP first.

The underlying structure we propose for the bare DC is substantially different from the one we propose for the prepositional DC: instead of NP being a complement to D, NP is a specifier to D, and instead of the (P-encased) CP adjoining to DP, the CP is the complement of D. However, head-raising of D to above NP and the availability of rightward extraposition of CP to adjoin to DP minimize the surface effects of these underlying structural differences. For instance, if the DC contains a (second) PP, that PP precedes the clausal complement in both structures:

(54) aftal-en [med læg-en] om at han fornyer recept-en hver måned
    agreement-DEF with doctor-DEF about that he renews prescription-DEF each month
    ‘the agreement with the doctor that he refills the prescription each month’

(55) den aftale [med læg-en] at han fornyer recept-en hver måned
    DEF agreement with doctor-DEF that he renews prescription-DEF each month
    ‘the agreement with the doctor that he refills the prescription each month’
This ordering reflects a general preference for CP dependents to follow PP dependents, in Danish and in many other languages (Dryer 1980:145–174, Grosu and Thompson 1977:139ff, Moulton 2015:310, Schmidtke-Bode and Diessel 2017:eg. 70). We don’t know the ultimate source of this preference, but the two DC structures we propose both allow for it, as long as we assume that CPs encased in a PP count as CPs with respect to this ordering principle. In (54) the observed order reflects order of adjunction: \([\text{PP } P \text{ DP}]\) adjoins before \([\text{PP } P \text{ CP}]\) as in (56). In (55) the PP-before-CP order comes about through extraposition of the CP complement of D across the PP, as in (57). (We assume that adjunction and extraposition both target the highest nominal projection, which is DP in (56) and dP in (57)).

\[
\begin{align*}
(56) & \quad \text{DP} \\
& \quad \quad \text{DP} \\
& \quad \quad \quad \text{P} \\
& \quad \quad \quad \quad \text{PP} \\
& \quad \quad \quad \quad \quad \text{P} \quad \text{DP} \\
& \quad \quad \quad \quad \quad \quad \text{P} \\
& \quad \quad \quad \quad \quad \quad \quad \text{PP} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \text{P} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{D} \quad \text{NP} \quad \text{P} \quad \text{DP} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad -\text{en} \quad \text{aftale} \quad \text{med} \quad \text{lægen} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{at han fornyer recepten hver måned}
\end{align*}
\]

\[
\begin{align*}
(57) & \quad \text{dP} \\
& \quad \quad \text{dP} \\
& \quad \quad \quad \text{PP} \\
& \quad \quad \quad \quad \text{P} \quad \text{DP} \\
& \quad \quad \quad \quad \quad \text{P} \\
& \quad \quad \quad \quad \quad \quad \text{PP} \\
& \quad \quad \quad \quad \quad \quad \quad \text{P} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \text{D} \quad \text{NP} \quad \text{P} \quad \text{DP} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{d} \quad \text{aftale} \quad \text{med} \quad \text{lægen} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{at han fornyer recepten hver måned}
\end{align*}
\]

Crucially, the definiteness marking is not affected by the presence of the second PP: the bare DC still receives prenominal definiteness marking and the prepositional DC suffixal
definiteness marking. Under our analysis this is because the PP adjoins to DP and as such does not affect the configuration of D and NP, which is what determines definiteness marking. Thus in the prepositional DC, D is the sister of a minimal N, whether or not a second PP is adjoined to DP, and thus the condition for suffixal definiteness marking is met. In the bare DC, that condition is not met – D is a sister to CP – and adjunction of a PP to DP, of course, does not change this fact. Consequently the definite D is realized as a prenominal article, the elsewhere case.

The signature semantic difference between the two types of DCs— prepositional DCs are anaphoric, bare DCs are referent establishing—is also unaffected by the addition of the PP. Thus (54) fits naturally in a sentential context like (58), where the prepositional DC is the complement of a factive verb, whereas (55) is felicitous with a verb of creation, as in (59). (See section 2.2 for discussion of this semantic difference.)

(58) Vi er glade for aftal-en med læg-en om at han fornyer recept-en
we are glad for agreement-DEF with doctor-DEF about that he renews prescription-DEF
hver måned.
each month
‘We are pleased with the agreement with the doctor that he refills the prescription each month.’

(59) Vi lavede den aftale med læg-en at han fornyer recept-en hver
we made DEF agreement with doctor-DEF that he renews prescription-DEF each
måned.
month
‘We made the agreement with the doctor that he refills the prescription each month.

If the two DCs are switched, as in (60) and (61) below, the resulting sentences are
infelicitous:¹⁹

(60) #Vi er glade for den aftale med læg-en at han fornyer recept-en
    we are glad for DEF agreement with doctor-DEF that he renews prescription-DEF
    hver måned.
    each month

(61) #Vi lavede aftal-en med læg-en om at han fornyer recept-en
    we made agreement-DEF with doctor-DEF about that he renews prescription-DEF
    hver månede.
    each month

The infelicity of (60) and (61) shows that the hypothesized link between syntax and semantics in the realm of DCs is a stable one which persists in the context of additional DP material, such as a postnominal PP. We take this as evidence that an analysis where the difference between the two DCs is built into their core underlying configuration, as we have proposed to do, is on the right track.

In general the addition of an attributive adjective to a definite DP triggers prenominal definiteness marking, since the AP adjoins to NP making it impossible for the definite D to be a sister to a minimal N as required for suffixal definiteness marking. We thus expect a shift to prenominal definiteness marking in the prepositional DC if an attributive adjective is included. This is correct as shown in (62), where the adjective *faste* ‘regular’ is added to the prepositional DC in (54). As (62a) shows, suffixal definiteness marking is now impossible; instead definiteness is marked by the prenominal article, as in (62b).

¹⁹(61) can be rescued by focus accent on the subject *vi* ‘we’. Subject focus makes the maker of the agreement the new information in the sentence, allowing for an anaphoric reading of the prepositional DC: the agreement is part of the common ground, it’s the identity of one of the parties of the agreement that is being established, not the existence of the agreement itself.
As expected, this effect on definiteness marking holds whether or not the PP `with the doctor’ is present, and it does not affect the anaphoric semantics associated with the prepositional DC. This latter observation is important in that it demonstrates that it is not the choice of definiteness marking (suffixal vs. prenominal) that conditions anaphoric vs. referent-establishing interpretation. If it were, (62b) should be referent-establishing contrary to fact. Rather, the semantic difference is linked to the underlying configuration of NP and CP relative to the definite D. In some circumstances (e.g. if no attributive adjectives are present), that underlying difference results in different realizations of definiteness marking, but it need not, as (62b) shows.

3.4 **Bare DCs with no N**

Before we turn to English DCs, we want to briefly examine the Danish constructions illustrated in (63) and (64). (Julien (2005:95, 96) cites corresponding Norwegian data.)

(63) Så sker der [det at alle forsvinder på en gang].

then happens expl the that everyone disappears on one time

*Then it happens that everyone disappears at once.*
These look like bare DCs, in that they involve the prenominal definite article and a CP. Moreover, they occur as the pivot of an expletive construction and so are clearly referent-establishing definites and not anaphoric. However, they lack a noun. Instead they have either nothing between D and CP (63) or an adjective appears between D and CP (64).

We propose to extend our analysis of the bare DC to these structures as in (65) and (66) respectively:

\[
\begin{array}{c}
(65) \\
\text{dP} \\
\text{d} \\
\text{DP} \\
\text{D} \quad \text{d} \\
\text{D'} \\
t \quad \text{CP}
\end{array}
\quad
\begin{array}{c}
(66) \\
\text{dP} \\
\text{d} \\
\text{DP} \\
\text{D} \quad \text{d} \\
\text{AP} \quad \text{D'} \\
t \quad \text{CP}
\end{array}
\]

In (65) D takes a CP complement inside a dP shell. The specifier of DP, where the N of a regular bare DC resides, is empty, accounting for the adjacency of D and CP in (63). The structure in (66) is identical, except that an AP occupies the specifier of DP. Head-raising of D to d results in the word order observed in (64): D A CP. The existence of these two constructions underscores our central claim that the primary relationship of the DC is that between D and CP.

A further indication of the tight relationship between D and CP in the bare DC, and the variations on it in (63) and (64), is that the CP is required and cannot be omitted.\(^{20}\)

\(^{20}\) (67b) is grammatical if *den* is stressed and interpreted as a demonstrative. The string *det mærkelig* in (69) can function as a well-formed DP under NP-ellipsis, but that interpretation is unavailable here because the expletive construction disallows an anaphoric definite as pivot.
4 English DCs

We have argued that anaphoric and referent-establishing DCs in Danish have very different structures, as revealed by the presence vs. absence of a preposition combined with
the structure-sensitive allomorphy of the definite morpheme. Hawkins (1978:130–149) has argued persuasively that there is a semantic difference to be made between anaphoric and referent-establishing definites in English, but did not suggest a corresponding syntactic difference. None of the authors we cited in section 3.1 who proposed analyses of DC constructions distinguished between anaphoric and referent-establishing uses. In this section we consider the question whether anaphoric and referent-establishing DCs in English might also have different structures, heretofore hidden from view by the absence in English of the overt structural signposts afforded by Danish.

Of course, since the two overt symptoms of the different syntactic structures in Danish (definite marking and the presence of P before CP) are absent in English, the evidence in English is going to be more subtle. We believe, however, that there are some indications of a duality of structure.

The examples in (72) below show that English has both referent-establishing and anaphoric DCs (Hawkins, 1978). The a.-example involves a referent-establishing DC, whereas the b.-example involves an anaphoric DC.

(72) a. We made the pledge that we would refrain from doing syntax.

b. We broke the pledge that we would refrain from doing syntax.

The two differ in whether possessors are allowed:

(73) We {denied/*made} Harvey’s claim that his pig could fly.

whether they can be indefinite (cf. Hawkins 1978:143):

(74) a. We resented the/*an allegation that the game was fixed.

b. We made the/an allegation that the game was fixed.

and whether they can be plural:
We resented/*made the allegations that they were cheating.

We have discovered two kinds of evidence that English, like Danish, has two different structures for DCs, correlating with the anaphoric and referent-establishing distinction. The first of these is a straightforward NPI-licensing test. If the structures in (76) and (77) differ along the lines of their Danish counterparts, we should expect a difference in licensing of an NPI within the CP by a negative in the D position:

76) We made the agreement that Harvey would get some money.
77) We broke the agreement that Harvey would get some money.

There is a difference, exactly as predicted if the structures of the English examples mirror those of the corresponding Danish ones:

78) We made no agreement that Harvey would get any money.
79) *We broke no agreement that Harvey would get any money.

The second argument for a difference in structure is based on some interesting (and we believe previously unnoticed) facts about extraposability. As is well known (since Ross (1967:1)) a restrictive relative clause can occur in an extraposed position, as in (80)–(82).

80) A man is at the door who wants to sell us some encyclopedias.
81) We sent the man away who wanted to sell us some encyclopedias.
82) A gun went off which I had cleaned. (Ross 1967:1, ex. 1.2)

What is less well known (though observed by Vergnaud (1974:81)) is that non-restrictive relative clauses are not similarly extraposable:
(83)  
  a. Your cousin Harvey, who again wants to borrow money, is at the door.
  b. *Your cousin Harvey is at the door, who again wants to borrow money.

(84)  
  a. We sent your cousin Harvey, who was again asking for money, away.
  b. *We sent your cousin Harvey away, who was again asking for money.

(85)  
  a. John, who had just caught the inspector’s ire, exploded.
  b. *John exploded, who had just caught the inspector’s ire. (Emonds 1979:234)

Mysterious as it is, it looks like there is a difference in extraposability between restrictive and non-restrictive relative clauses, presumably adjoined to NP, and non-restrictive ones, presumably adjoined to DP.\(^{21}\) Let us provisionally call it the High Adjunct Freezing Effect: an element adjoined to DP cannot further extrapose to adjoin even higher to some other constituent.

Recall that our analysis of Danish prepositional DCs led us to the conclusion that in them the PP containing CP is adjoined to DP, as in (44). If this is correct, they should be subject to the High Adjunct Freezing Effect, while the CP in a bare DC, which originates as a complement to D, should not. These predictions are correct, as seen in (86)–(87):

(86)  
De fremførte den påstand på mød-et at fyringer-ne var absolut nødvendige.  
they advanced the claim at meeting-DEF that lay-offs-DEF were absolutely necessary

‘At the meeting they made the claim that the lay-offs were absolutely necessary.’

(87)  
*De benægtede påstand-en på mød-et om at fyringer-ne var absolut  
they denied claim-DEF at meeting-DEF about that lay-offs-DEF were absolutely

nødvendige.  
necessary

\(^{21}\) We thank Jim McCloskey and Ivy Sichel for help with the literature on extraposition of relative clauses; see Sichel (2018:365-371) for relevant discussion of extraposability of restrictive relative clauses.
Intended: ‘At the meeting they denied the claim that the lay-offs were absolutely necessary.’

In (86) we have a referent-establishing bare DC (‘the claim that the lay-offs were absolutely necessary’) and the CP is extraposed across the PP dependent of the main verb (‘at the meeting’). The ungrammaticality of (87) shows that the CP complement of an anaphoric prepositional DC cannot extrapose out of the prepositional DC. The only possible reading of (87) is one where the PP is part of the prepositional DC, i.e. that the claim was made at the meeting, and denied at some later unspecified time. That reading does not involve extraposition out of the prepositional DC, but only the kind of DP-internal extraposition of the clausal complement documented for both bare and prepositional DCs in section 3.3.

Returning to English, we now ask whether there is a difference in extraposability between a DC involving a referent-establishing definite and one involving an anaphoric definite. In (88), exhibiting a referent-establishing definite (which would correspond to a Danish bare DC), extraposition is practically obligatory. In (89), where the definiteness is unambiguously anaphoric, extraposition is impossible:

(88) a. ?The claim that unicorns eat broccoli was made.
    b. The claim was made that unicorns eat broccoli.

(89) a. Harvey’s claim that unicorns eat broccoli was unwise.
    b. *Harvey’s claim was unwise that unicorns eat broccoli.

These facts make sense if we assume that English, like Danish, has different structures for anaphoric and referent-establishing DCs, with the CP in an anaphoric DC adjoined to DP while the CP in a referent-establishing DC originates in a low position.
We suggest, then, that anaphoric and referent-establishing DCs in English have different structures, just like those we have proposed for Danish: referent-establishing DCs involve a D taking a CP complement, and head-movement of the D to a higher little d position; while anaphoric DCs have a structure where the CP is adjoined at the level of DP.\textsuperscript{22}

5 Conclusion

If our analyses are accepted, the central puzzle posed by the interaction between definiteness marking and the distribution of the bare and prepositional DCs in Danish is solved. The solution involves positing two different structures, one where a preposition-encased CP is adjoined to DP and one where a bare CP is initially a complement of D[\textsc{def}], in which D then raises to a higher functional head, accounting for the selectional properties and the surface order of the parts of the construction.

The proposed structure for prepositional DCs is consistent with earlier work on Scandinavian DPs showing that PPs are never complement to N or D, but always adjoined to DP (Hankamer and Mikkelsen 2005:111–113, 118, 2008:326–327, 2018:65–66, Julien 2005:67–69). The present paper thus adds to the growing body of evidence that PPs are always peripheral in the DP (Adger, 2012).

We have demonstrated that the different structures correspond to a semantic/pragmatic difference: bare DCs are always referent establishing, while definite prepositional DCs are always anaphoric (in the sense developed by Hawkins (1978:130–149).)

Reviewing several discussions from the literature about the nature of DC constructions in English, we have found some evidence that English also has two structures, which also correspond to the anaphoric vs. referent-establishing distinction. but neither structure is

\textsuperscript{22}We leave aside the potentially interesting question whether the English anaphoric DC contains a silent P.
what previous authors thought it was.

In particular, several past analyses of “D N CP” liken the DC to apposition, but struggle to provide a specific syntactic structure for this apposition. Reviewing the literature on apposition, and close apposition in particular (Acuña-Fariña 2009, Burton-Roberts 1975, Haugen 1953, Hockett 1955, Lee 1952, Lekakou and Szendrői 2012, Meyer 1989, de Vries 2008:xx), we are sympathetic to their struggles. As far as we can tell, scholars working on (nominal) close apposition (the poet Burns) have struggled equally to assign it a syntactic structure, some going so far as to say that its structure is indeterminate (Meyer, 1989) or that it doesn’t have a fixed internal structure (Acuña-Fariña, 2009).

These analyses of DC constructions all seemed to incorporate the intuition that the CP must be in apposition with the N, which is also what is sometimes assumed in the close apposition literature for the parallel “D N Name” construction (cf. e.g. Burton-Roberts (1975:400)).

The Danish definiteness exponence evidence indicates that if the prepositional DCs involve close apposition, it cannot have the structure [D [N [P [CP]]]], but rather [[D N] [P [CP]]]. Interestingly, the allomorphy of definiteness also tells us that the structure of nominal close apposition too involves D and N combining first, before the resulting DP combines with the Name:

(90) digter-en Burns
    poet-DEF B. 
    the poet Burns

(91) tall-et syv
    number-DEF seven
    the number seven
The realization of the definite morpheme as a suffix clearly indicates that the structure is $[[D \ N] \ Name]$ and not $[D \ [N \ Name]]$. So the scholars who wanted to assimilate the structure of DCs to that of nominal close apposition may well have been right, but the structure has to be $[[D \ N] \ CP]$, and not $[D \ [N \ CP]]$. 

(92)   farv-en   lilla
  color-DEF purple
    the color purple
References


