Articles and Bare Nominals

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Abstract

Many linguists hold that nominal phrases, which have traditionally been considered noun phrases, are in fact determiner phrases (the DP hypothesis). Longobardi elaborates an influential analysis of nominals based on the hypothesis that relates distribution of bare nominals to their syntax and semantics. He develops such an analysis for Romance and Germanic languages, and suggests that it is part of Universal Grammar that nominal phrases are actually determiner phrases. This paper argues that his analysis has serious problems, and that the problems arise from the DP hypothesis, which directs the analysis.

Key Words

article, determiner, bare noun, DP hypothesis, definite/indefinite, numeral classifier
Most contemporary European languages have articles, which together with demonstratives and other related expressions form a syntactic category. Expressions belonging to the category, called *determiners*, are traditionally taken to figure as specifiers of noun phrases (in short, NPs). But many linguists attribute a more prominent role to determiners. They propose that nominal phrases, which have traditionally been considered noun phrases, are in fact headed by determiners, and thus really *determiner phrases* (in short, DPs).\(^1\) This proposal is called the *DP hypothesis*. Longobardi (1994) elaborates an influential analysis of nominals based on the hypothesis that relates distribution of bare nominals (i.e., nominals without determiners) to their syntax and semantics. He develops such an analysis for Italian, extends it to other Romance and Germanic languages, and suggests that it is “part of . . . UG”, Universal Grammar, that nominal phrases are actually determiner phrases (*ibid.*, 641).

In this paper, I argue that his analysis has serious problems, and that the problems arise from the DP hypothesis, which directs the analysis by assuming that determiners are (virtually) essential to nominal phrases.

1. Bare nominals and the DP hypothesis

Many linguists accept the *DP hypothesis*. They motivate it with an analysis of nominal

\(^1\)See, e.g., Szabolcsi (1983) and Abney (1987). On this proposal, noun phrases in the proper sense, NPs, figure as complements of determiners (they can also figure as predicates). I use the term ‘nominal phrase’ (in short, ‘nominal’) for phrases traditionally called *noun phrases* without implying a view about their correct analysis.
phrases of languages with articles (e.g., English or Italian), and assume that the analysis can be extended to nominal phrases of all human languages. Thus Poole, for example, say “We are assuming that the determiner system . . . form[s] part of UG” (2011, 78). But the hypothesis has an obvious problem. Ingrained in the hypothesis is the assumption that determiners are virtually essential to nominal phrases: although nominals might lack (or appear to lack) determiners, such phrases must be exceptions, not a rule, and there must be serious constraints on their use. But a wide range of languages has various kinds of bare nominals, namely, nominal phrases with no determiners.

Although many contemporary European languages have articles, a large variety of languages do not. And in languages with no articles, use of bare nominals is a rule rather than an exception. For example, Latin, Korean, and Mandarin Chinese, which have no articles, routinely employ bare nominals:

(1) poet.\text{SG.NOM} \text{was.reciting}

‘{The, A} poet was reciting.’

(2) Kay-ka pakk-eyse nol-koissta. (Korean)

dog-\text{NOM} \text{outside-LOC} \text{be.playing}
Note that all the bare nominals in the examples given below feature count nouns. I ignore bare nominals featuring mass nouns, partly because English (unlike, e.g., Italian) regularly uses bare nominals featuring mass nouns:

\[(a) \text{ Fresh water is often drinkable. (Longobardi 1994, 642)}\]

Longobardi treats them like bare nominals featuring plural count nouns, i.e., plural forms of count nouns (e.g., *big beavers* and *dogs* in (6a)–(6b)). See footnote 8 and §4.2.

\[\{\text{The dog is, A dog is, Dogs are}\} \text{ playing outside.}\]

(3)  **Gou yao guo malu.** (Mandarin; Cheng & Sybesma 1999, 510)

dog want cross road

\[\text{‘The dog wants to cross the road.’ (Not: ‘A dog wants to cross the road.’)}\]

Moreover, even languages with a substantial article system integrated into the determiner system commonly resort to bare nominals. English, for example, often does so:

(4)  Maureen is captain of the team. (Quirk et al. 1985, 276)

(5)  a. I ate lions. (Longobardi 1994, 633)

b.  **Beavers** build dams.

(6)  a. **Big beavers** build dams. (Ibid., 642)

b.  **Dogs** were sitting on my lawn. (Ibid., 645)
Longobardi (1994) does not discuss languages without articles. But he elaborates an analysis based on the DP hypothesis (a DP analysis) to accommodate bare nominals of contemporary Romance and Germanic languages (e.g., Italian and English), which have articles. To do so, he restricts the analysis to argumental nominals, nominals figuring as arguments: subjects, direct objects, prepositional objects, etc. Non-argumental nominals, such as those in “vocative, predicative, or exclamatory contexts” (ibid., 612), might be noun phrases (in the strict sense), namely, phrases headed by nouns. For example, the bare nominal ‘captain of the team’, which figures as a predicate in (4), figures as a noun phrase in the sentence. But argumental nominals, he holds, must have determiner heads (ibid., 628).

But bare nominals can figure as arguments as well, as in (5)–(6) as well as (1)–(3). How can one take such nominals to be headed by determiners? Longobardi holds that argumental bare nominals must be either (a) determiner phrases whose determiner positions are empty (ϕ-determiner DPs) or (b) those resulting from the nouns moving to the determiner position (N-to-D move DPs). And he argues that bare nominals have limited distribution because the two kinds of DPs are subject to serious constraints.

First, occurrence of ϕ-determiner DPs (which he takes to have the empty determiner,

\[ [\epsilon] \text{-determiner DPs} \]

\[ [\epsilon] \text{-determiner DPs} \]

5Cheng & Sybesma (1999; 2005) attempt to extend Longobardi’s approach to classifier languages (e.g., Chinese and Korean) by taking (numeral) classifiers to be analogous to articles. But this does not help to extend the approach to languages with neither articles nor classifiers (e.g., Latin). See §4.1.

6He (ibid., 628) attributes this thesis to Stowell (1989).
He proposes to “assume” that the first two of the above-mentioned constraints are “universal principles”, and argues that “It would probably be surprising if [they] were not “part of . . . UG” (ibid., 641). That is, their occurrence is constrained by “a sort of lexical government requirement . . . similar to that constraining empty categories in general” (ibid., 616; my italics); they can figure only in positions controlled by predicates, which include object positions but (usually) exclude pre-verbal subject positions (ibid., 616).

Second, Φ-determiner DPs must be subject to “the default existential interpretation” (ibid., 641). So (5a), for example, where he takes ‘lions’ to be a Φ-determiner DP, is equivalent to ‘There are lions I ate.’ Third, although N-to-D move DPs are not constrained by the lexical government requirement (for the determiner position is filled by the moved nouns), they are subject to a semantic constraint: common nouns moved to the determiner position must be subject to the generic reading, as in (5b) (ibid., 642).7

Longobardi argues that these constraints help to explain the limited distribution of bare nominals in Italian, and takes this to support his analysis, which incorporates the constraints. But the analysis does not fare well with English, which is more liberal with bare nominals than Italian as Jespersen (1954, 163) notes. Consider, e.g., the underlined bare nominals of (6a)–(6b): ‘big beavers’ and ‘dogs’. The former would have to be an N-to-D move DP (for it is not existential). If so, however, the movement must place the noun ‘beavers’ before the adjective ‘big’, as in ‘*beavers big’. And the latter would have to be a Φ-determiner DP (for it is existential). Then it would violate the lexical government

7He proposes to “assume” that the first two of the above-mentioned constraints are “universal principles”, and argues that “It would probably be surprising if [they] were not “part of . . . UG” (ibid., 641).
He gives the same analysis of bare nominals featuring mass nouns modified by adjectives (e.g., fresh water in ‘Fresh water is often drinkable’), and holds that mass or plural count nouns can figure in bare nominals because they are both “kind-referring” (ibid., 634). This relates to Chierchia (1998)’s analysis of bare nominals. See §4.2.

This does not solve a similar problem: existential bare nominals can figure as prepositional objects, which are not controlled by predicates, as in ‘I spoke with young children’ (cf., (6c) in Longobardi [ibid., 612]). Longobardi suggests an alternative solution: in English, the default existential reading constraint optionally applies to the S-structure while the lexical government requirement applies to the logical form (ibid., 645f).

And to accommodate existential bare nominal subjects (e.g., ‘dogs’ in (6b)), he suggests that some predicates of English can license Φ-determiner DPs in the subject position because those predicates can control the position in the logical form, albeit not in the S-structure.

These two ideas, LF movement and flexibility of predicate-controlled positions across languages, considerably relax the three constraints on bare nominals. Despite the relaxation, however, a wide range of languages resort to uses of bare nominals that violate the requirement, because it figures in the pre-verbal subject position.

To resolve these problems, Longobardi invokes the distinction between logical form (in short, LF) and S-structure. He argues that in English (unlike in Italian), the N-to-D movement is covert, that is, the noun moves to the determiner position not at the S-structure level but at the logical form level (ibid., 641f). Although ‘beavers’ follows ‘big’ in the S-structure of (6a), he argues, it precedes the adjective in the logical form (ibid., 642):8

[Beavers [big e]] build dams.

He gives the same analysis of bare nominals featuring mass nouns modified by adjectives (e.g., fresh water in ‘Fresh water is often drinkable’), and holds that mass or plural count nouns can figure in bare nominals because they are both “kind-referring” (ibid., 634). This relates to Chierchia (1998)’s analysis of bare nominals. See §4.2.
constraints. This is discussed in the next section.

2. Definite bare nominals

It is usual to distinguish nominals (or their uses) as generic and non-generic (or individual), and non-generic nominals as definite and indefinite. In English, for example, definite and indefinite nominals are usually marked by definite and indefinite articles, respectively. And indefinite nominals often have the existential meaning; ‘A dog is playing outside’, for example, is equivalent to ‘There is a dog that is playing outside.’ Now, Longobardi’s analysis implies that bare nominals cannot figure as definite nominals. His constraints on bare nominals require N-to-D move DPs to be generic, and $\theta$-determiner DPs indefinite. But a wide variety of languages often resort to bare nominals for definite reference.

Surely, languages without articles regularly use definite bare nominals. Consider, e.g., the underlined bare nouns in the Latin, Korean, and Chinese examples given above: 10

(1) poëta recitabat. (Latin; Phinnery et al. 1988, 91)

10Longobardi holds that in Romance and Germanic languages, “singular count nouns” (i.e., singular forms of count nouns) cannot figure in bare nominal arguments unless they take “a mass interpretation” (1994, 632f). Note however that the Latin bare nominal poëta in (1) features a singular count noun that cannot be given a mass interpretation. See also the Greek examples (7)–(8) below. Romance and Germanic languages, pace Longobardi, also allow bare nominals featuring (genuine) singular count nouns. See (10)–(14), (16), and (18) in §3.
poet.SG.NOM was.reciting

‘{The, A} poet was reciting.’

(2) Kay-ka pakk-eyse nol-koissta.  (Korean)
dog-NOM outside-LOC be.playing

‘{The dog is, A dog is, Dogs are} playing outside.’

(3) Gou yao guo malu.  (Mandarin; Cheng & Sybesma 1999, 510)
dog want cross road

‘The dog (not: a dog) wants to cross the road.’

The Latin bare nominal in (1) can be used with the definite, as well as indefinite, reading.

It is the same with the Korean kay ‘dog’ in (2). And the Mandarin Chinese gou ‘dog’ in (3) can be used only with the definite reading (for it figures in the subject position). 11

Moreover, languages with articles may also use bare nominals for definite reference.

In Classical Greek, which has the definite article, some common nouns (e.g., ὄνομα.pi.οζ ‘man, human’) may figure in definite bare nominals:

(7) μαίνεται ὄνομα.  (Plato, Phaedrus 268c) 12

11In Chinese, the subject (or topic) position has a strong tendency to avoid indefinite nominals; see Chao (1968, 76ff) and Li & Thompson (1981, 84f). Bare nominals in the object position (e.g., malu ‘road’ in (3)) can take the indefinite reading. See footnote 29.

12Smythe, who cites Plato’s use of (4) in the Phaedrus, renders it as “the man is mad”, and adds the gloss “a definite person, distinguished from other men” (1956, 287).
is.mad man.SG.NOM

‘The man is mad.’ (Or ‘A man is mad.’)

And the definite article might be omitted, yielding definite bare nominals, in “concrete coördinated words” (Smythe 1956, 291):

(8) πόλις καὶ οἶκος ἡμῖν παράδοτε. (Thucydides, 2.72\(^{13}\))
city.SG.ACC and house.PL.ACC we.DAT surrender

‘Surrender to us {the, your} city and houses.’

Although classical Greek has the definite article, the language differs from contemporary English and Italian in having no indefinite article (Smythe 1956, 287). So the question arises whether Longobardi’s analysis is valid at least for languages with the indefinite as well as the definite article. The answer is no. For example, Hausa has both kinds of articles, but still employs bare nominals for definite as well as indefinite reference:

(9) Yaro ya zo. (Lyons 1999, 52)

boy AUX come

‘{The, a} boy has come.’

\(^{13}\)The passage is quoted by Smythe (ibid., 291).
We have seen that one cannot extend Longobardi’s analysis to obtain a uniform DP analysis of nominals. Bare nominals are allowed in a wide variety of languages, including languages with articles, and they can be used for definite as well as indefinite reference. Now, some might attempt to defend the analysis by restricting it to the languages Longobardi focuses on: contemporary Romance and Germanic languages. But the analysis, as we shall see, conflicts with the use of bare nominal in these languages as well.

3. Bare nominals of Romance and Germanic Languages

Although a wide range of languages have articles, such languages are “in a distinct minority” (Lyons 1999, 48). In particular, not all Indo-European languages have articles, and in the case of some Indo-European languages with articles, “there is documentary evidence . . . of the origins as well as the development of an article system” (Hewson 1972, 11). The definite article the of Modern English stems from the masculine singular form of the Old English demonstrative, se. Although it is debatable whether se is already used as the definite article in Old English, Old English clearly differs from Modern English in the distribution of bare nominals: bare nominals are frequently used in Old English in contexts

\[\text{14Hewson also says that proto-Indo-European had no article (ibid., 11) while citing Hodler (1954): “we may well assume with certainty that the article was absent in the proto-Indo-European” (Hodler 1954, 9; my translation of a passage quoted by Hewson [1972, 11]).}\]

\[\text{15The indefinite article a(n) stems from the old English numeral an ‘one’. See, e.g., Jespersen (1954, 405ff), Hewson (1972, Ch. 1), and Sommerer (2011, 291).}\]
in which Modern English would require addition of the definite article (or other determiners indicating definiteness, e.g., demonstratives). If so, does Modern English bans definite bare nominals altogether? Many linguists seem to assume the answer is yes. Sommerer, for example, suggests this view in his study of the development of the definite article in English. He says, “In Modern English . . . the overt marking of definite reference is obligatory” (2011, 291). But this a priori thesis is belied by the actual use of articles in contemporary English.

Despite its robust article system, contemporary English regularly employs bare nominals. So Jespersen (1954), for example, contrasts them with nominals with definite or indefinite articles, and takes them to involve “the zero article” (ibid., 403). Now, bare nominals, in contemporary English, are often used for indefinite reference when the nouns featured in them are mass or plural count. Accordingly, Quirk et al. (1985), for example, introduce the so-called zero article by comparing it to the indefinite article; they say, “With plural count nouns and with noncount nouns, the indefinite article does not occur . . . . The zero article is used instead” (1985, 274). This might suggest that singular count nouns (i.e., singular forms of count nouns) cannot figure in bare nominals. And Longobardi holds that in Romance and Germanic languages (including English), singular count nouns cannot figure

\[16\] For such examples, see, e.g., Hewson (1972, 18f) and Sommerer (2011, 14 & 26).

\[17\] He elaborates on this statement: “In Present Day English, singular count, plural count and non-count nouns are not supposed to occur ‘bare’ when they are used in a context where the speaker or hearer knows the entities from previous discourse, the intermediate or larger situation or general world knowledge; in other words, in all contexts that make it clear that the noun refers to a unique, identifiable entity” (ibid., 13).
in bare nominals at all unless they take “a mass interpretation” (1994, 632f). As Quirk et al. add (1985, 276), however, singular count nouns can also form bare nominals (without taking a mass sense). Moreover, such bare nominals can be used as definites as well as indefinites or generics.\footnote{So some linguists distinguish two forms of the zero article: the one used with mass or plural count nouns, and the one used with singular count or proper nouns. Master (1997, 221) calls the first “the zero article”, and the latter “the null article”. See also Chesterman (1991, 16f).}

Jespersen says that English has “a strong tendency to do without [the article] in many cases where the individualization is self-evident”,\footnote{For the article, Jespersen says, “is used more sparingly in English than in many other languages; it is used chiefly when the word without it would not be easily understood as sufficiently specialized” (1933, 163).} and gives as examples of nouns illustrating this some singular count nouns, such as (a) “father, mother, baby, uncle, nurse, cook and other names of persons in familiar discourse”, and (b) names of meals (1933, 163):\footnote{(10a)–(10b) are from Jespersen (1954, 532), (10c)–(10d) from Jespersen (1933, 163). See also, e.g., Jespersen (1933, 163-169) and Quirk et al. (1985, 276-281).}

(10a) – (10b) are from Jespersen (1954, 532), (10c)–(10d) from Jespersen (1933, 163). See also, e.g., Jespersen (1933, 163-169) and Quirk et al. (1985, 276-281).
d. He came immediately after lunch.

And ‘last’ and ‘next’ figure in definite bare nominals with nouns for periods of time. For example, ‘last month’ and ‘next month’, in contrast to ‘the last month’ and ‘the next month’, relate to the months immediately before or after the present month. 21

Especially interesting among bare nominals are those “consisting of two (or three) parallel members” (Jespersen 1933, 168):

(11) a. from beginning to end (Ibid., 168)
b. from end to end (Ibid., 168)

(12) a. Thus father and son were left together. (Ibid., 168)
b. And blood is warm in man and maid. (Jespersen 1954, 464)

In these examples, the italicized nominals are used for definite reference, and can be supplemented by the definite article. Interestingly, the bare nominals figure in coordination in contexts where they would not be allowed without coordination: (12b), for example, is well-formed, although ‘*And blood is warm in maid’ is not.

Some might hold that the singular count nouns in (11a)–(11b) take no article because

21See Jespersen (1933, 166), who uses as representative examples ‘next Sunday’ and ‘last Sunday’ while noting that ‘on Sunday’ means either ‘next Sunday’ or ‘last Sunday’. For more on bare nominals with ‘last’ or ‘next’, see Jespersen (1954, 519ff).
these are idioms where the nouns “have largely lost their independent nominal status” (Quirk et al. 1985, 280). But one cannot hold the same about (12a)–(12b). The coordinated bare nominals in these sentences have a productive structure. As Quirk et al. point out, “the parallel structure with the zero article is productive of new instances” in cases “where the two nouns are coordinated, and particularly where the coordination is emphasized by a correlative such as both . . . and or neither . . . nor” (ibid., 280):

\[(13) \quad \begin{align*}
    &a. \quad \text{The birth took place this morning, and both (the) mother and (the) child are doing well. (Ibid., 280)} \\
    &b. \quad \text{They pitched the camp between a small winding river and a ridge covered with brushwood; but neither (the) river nor (the) brushwood afforded protection they needed in the event of attack. (Ibid., 280)}
\end{align*}\]

Moreover, coordinated bare nominals are used in other languages with robust article systems, including many that are less tolerant of bare nominals than English. The Classical Greek sentence (8), for example, has the coordinated bare nominal phrase \(\pi\acute{o}l\upsilon\kappa\omicron\iota\iota\kappa\iota\varsigma\) ‘(the) city and houses’ (where \(\pi\acute{o}l\upsilon\) is singular count). Contemporary Italian and French, which are far less tolerant of bare nominals than contemporary English, also regularly use

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\(22\) I do not think this view is adequate for accounting for the wide variety of examples given in Jespersen (1954, 466f), e.g., “As he stood on the platform at Thurles, bag in hand” (ibid., 466).
coordinated bare nominals:

(14)  

a.  
\begin{equation}
\text{Cane e gatto erano ugualmente luridi. (Heycock & Zamparelli 2003, 444)}
\end{equation}

dog.SG and cat.SG were equally filthy
‘(The) Dog and (the) cat were equally filthy.’

b.  
\begin{equation}
\text{Chien et chat avaient tous deux l’air sale. (Roodenburg 2004, 305)}
\end{equation}

dog.SG and cat.SG had all two the look filthy
‘(The) Dog and (the) cat were both filthy.’

In these sentences, too, the coordinated bare nominals are definite.

Let me note in passing that substantivized adjectives (i.e., adjectives forming NPs without accompanying nouns) can also form bare nominals when they are coordinated: 23

(15)  

a.  
\begin{equation}
\text{Old and young marched side by side. (Jespersen 1961, 273)}
\end{equation}

b.  
\begin{equation}
\text{He woes both high and low, both rich and poor, both young and old (Ibid., 273)}
\end{equation}

c.  
\begin{equation}
\text{I’ve found hunter and hunted at once. (Jespersen 1954, 465)}
\end{equation}

\footnote{23See also (17a) below.}
In (15a)-(15b), substantivized adjectives are coordinated; in (15c), a substantivized adjective is coordinated with a noun. And they figure without determiners. But Longobardi proposes a restriction on the N-to-D movement that rules this out. He holds that in English, as in Italian, substantivized adjectives cannot figure at all without determiners:

\[(15)\quad \text{d.} \quad \ast \text{Rich are becoming even richer. (Longobardi 1994, 632)}\]

And he argues that this supports his analysis of nominals: while overt nouns can move to the determiner position to form generic DPs, “covert nouns” cannot (ibid. 644). But this restriction on the N-to-D movement rules out not only (15d) but also (15a)-(15c). Given the restriction, one cannot take the underlined nominals in these sentences to involve the N-to-D movement. Nor can one take them to involve empty determiners, because they are not indefinite but generic or definite. Now, some might consider relaxing the restriction, but this does not help much. Longobardi’s analysis would bar bare nominals from being definite. In (15a), however, ‘hunted’, as well as ‘hunter’, is used to form a definite bare nominal.

Can one cope with definite bare nominals in contemporary Germanic and Romance languages with minor modifications of Longobardi’s analysis? One might allow singular count nouns to move to the determiner position, and hold that the “bare” nominals with those nouns in the position must be definite although those with mass or plural count nouns must

\[\underline{\text{\ldots}}\]

\[24\]In Old or Middle English, however, ‘riche’, for example, can (without coordination) be used without article as a nominal for the rich people. See Jespersen (1961, 272).
be generic. But this proposal conflicts with the variety of uses of bare nouns.

First, it conflicts with the fact that the languages in question do not regularly use *uncoordinated* bare nominals with singular count nouns. If ‘maid’ can take the determiner position, why is ‘*Blood is warm in maid*’, for example, ill-formed? Second, bare nominals with singular count nouns can be used as indefinites or generics as well:

(16) a. There is neither dog nor heifer, horse nor sheep, Will wet his lip within that Cup of stone. (Jespersen 1954, 465)

b. oak and elm have pleasant leaves. (Ibid., 464)

The underlined nouns in (16a) are indefinite, those in (16b) generic.25 Moreover, *plural count* nouns (in coordination) can also be used for definite reference without determiners:

(17) a. Pursuers and pursued vanished into the night. (Jespersen 1954, 465)

b. Forks and knives were equally dirty. (Heycock & Zamparelli 2003, 448)

25See also (18a) below. I think the underlined nouns in the following can be used for indefinite reference as well:

(16) c. for three days horse and foot, cannon and tumbril, drum and standard, kept pouring downward past the mill. (Ibid., 464)

But Peter Master holds that they can only be definite (private conversation).
To accommodate coordinated bare nominals, Heycock and Zamparelli (2003) propose an analysis that involves more departure from Longobardi’s approach: (a) bare nominals coordinated by *and* can move to the *DP specifier position* (if the determiner position is empty) because the *and*-coordinated NPs have a special feature, [±Qu], due to the functional head *and*, and (b) the resulting bare nominals must be definite. 26 Although this proposal meets the last of the three objections to the previous proposal, it is subject to the others.

The first objection applies, because the proposal does not help to make room for the use of uncoordinated bare nominals with definite reference (e.g., (10a)–(10d)). Similarly, it does not help to make room for coordination of bare nominals (featuring singular count nouns) that does not involve *and* or the like (e.g., *neither . . . nor . . .*):

(18) a. like *monster* devouring *monster* in a Dream (Jespersen 1954, 467)

   b. And as *marquess* succeeded *marquess* and *prince* *prince* (Ibid., 467)

The second objection also applies, because coordinated bare nominals with singular count nouns might be indefinite, as in (16a), while such nominals must be definite on Heycock and Zamparelli’s analysis (2003, 449).

26See also Roodenburg (2004), who gives a variant of Heycock & Zamparelli’s analysis while criticizing some aspects thereof. The objections to Heycock & Zamparelli’s analysis given below apply to Roodenburg’s analysis as well.
4. The DP hypothesis and its variants

The diversity of bare nominals across various languages, I think, yields a strong case against the DP hypothesis. On the hypothesis, determiners must be virtually essential to nominal phrases; nominals lacking determiners must be exceptional, and subject to serious constraints on their use. Longobardi (1994) supports the hypothesis by elaborating an influential DP analysis that attempts to explain the distribution of bare nominals while relating syntax of nominals to their semantics. As we have seen, however, his analysis conflicts with various uses of bare nominals in the very languages he focuses on: Romance and Germanic languages (e.g., Italian and English). Moreover, one cannot extend a DP analysis to languages without articles, where bare nominals are regularly used while nominals with other “determiners” (e.g., demonstratives) are used only for specific purposes.

Can one make suitable modifications of the DP hypothesis? Let me discuss two

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27The DP hypothesis presupposes that all languages have the syntactic category of determiners. So Poole, for example, holds that “the determiner system . . . form[s] part of UG” (2100, 78). But it is implausible to take languages without articles to have a determiner system simply because they have counterparts of other expressions integrated into the system in languages with articles (e.g., demonstratives). Moreover, some languages with articles (e.g., Kana) use articles and demonstratives in different positions in the nominal phrase:

(a) ló bárí āmā (Kana; Dryer 2011c, §3; Ikoro 1996, 70)
DEF fish this
this fish

So Dryer concludes, I think rightly, that although the determiner category “is well-motivated for English” and the like (2011c, §3), it is not so for other languages (2011b, §3).
4.1. Cheng and Sybesma on Chinese bare nouns

Cheng and Sybesma (1999; 2005) attempt to extend Longobardi’s analysis to some languages without articles: (numeral) classifier languages, languages that regularly involve (numeral) classifiers in counterparts of such numeral noun phrases as ‘three dogs’ or ‘three books’. To do so, they compare Chinese (or various dialects thereof) to Italian. In Chinese, indefinite bare nominals cannot figure in the subject position; the Mandarin Chinese gou ‘dog’ in (3), for example, cannot be considered indefinite:

(3)  Gou yao guo malu. (Mandarin; Cheng & Sybesma 1999, 510)

    dog want cross road

    ‘The dog wants to cross the road.’ (Not: ‘A dog wants to cross the road.’)

They take this restriction on Chinese nominals to have the same basis as the restriction on Italian bare nominals, and argue that Chinese common nouns must be “subordinated” by classifiers to figure as arguments just as Italian common nouns (on Longobardi’s analysis).

For examples of classifiers, see (19a)–(19b) and (21a) below. For more on classifiers and classifier languages, see, e.g., Chao (1968), Cheng & Sybesma (1999; 2005), Croft (1994), Downing (1996), Gil (2011), and Yi (2009; 2011a; 2011b).
must be “subordinated” by determiners to do so.

Accordingly, they propose two structures for Chinese nominals:

(CL1) **Classifier Phrase:** \[ [\text{CIP} [\text{CL'} \text{ CL}^0 \text{ NP}]] \]

(CL2) **Numeral Phrase:** \[ [\text{NumeP} [\text{Nume'} \text{ Nume}^0 [\text{CIP} [\text{CL'} \text{ CL}^0 \text{ NP}]]]] \]

Classifier phrases must always be definite because classifiers, they hold, are akin to definite articles. Numeral phrases must always be indefinite, they hold, because “noun phrases with overt numerals necessarily yield an indefinite interpretation, owing to the quantificational nature (∋) of numerals” (*ibid.*, 528). Moreover, on their account, all definite nominals of Chinese must have the classifier phrase structure, (CL1), all indefinites the numeral phrase structure, (CL2). Thus definite or indefinite bare nominals must also have those structures. Definite bare nominals, on their account, are classifier phrases where the nouns move to the classifier position, indefinite ones numeral phrases whose classifier and numeral positions are empty. This, they argue, explains why indefinite bare nominals (unlike definites) cannot figure as subjects: having empty heads, they are restricted to lexically governed positions.

Does this analysis help to defend the DP hypothesis or a suitable modification thereof: common nouns cannot figure as arguments without being subordinated by determiners (except under special conditions)? I think not.

Many languages (e.g., Latin) lack not only articles but also classifiers, and such languages regularly resort to **absolutely bare** nominals, nominals with neither determiners
So it is necessary to invoke a feature specific to Chinese to explain the avoidance of indefinite bare nominals in the subject position. And we can do so: in Chinese, the subject position, being the topic position, has a strong tendency to avoid indefinite nominals, bare or not (see footnote 11). This also explains why Chinese tends to avoid numeral noun nor classifiers:

(1) **poēta** recitābat. (Latin; Phinnery et al. 1988, 91)

poet.SG.NOM was.reciting

‘{The, A} poet was reciting.’

And the Latin *poēta*, the subject of (1), can be considered both definite and indefinite. It would be wrong to take the bare nominal to have a covert article or classifier.

And Cheng and Sybesma’s analysis of Chinese nominals does not hold for other classifier languages. First, the distributional restriction on indefinite bare nominals is not a general feature of classifier languages. In Korean, which like Chinese is a classifier language, a bare nominal can figure in the subject position as well:

(2) **Kay-ka** pakk-eyse nol-koissta. (Korean)

dog-NOM outside-LOC be.playing

‘{The dog is, A dog is, Dogs are} playing outside.’

And the bare nominal subject (e.g., *kay* ‘dog’) can be indefinite as well as definite. Second, 29So it is necessary to invoke a feature specific to Chinese to explain the avoidance of indefinite bare nominals in the subject position. And we can do so: in Chinese, the subject position, being the topic position, has a strong tendency to avoid indefinite nominals, bare or not (see footnote 11). This also explains why Chinese tends to avoid numeral noun

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although some dialects of Chinese have nominals that might be considered classifiers phrases,\textsuperscript{30} not all classifier languages allow such constructions. In Korean, for example, numerals cannot be omitted in numeral noun phrases in which classifiers figure:

\begin{align*}
\text{(19) a.} & \quad \text{kay }^*\text{sey} \text{ mali} \\
& \quad \text{dog three } {\text{CL}}_{\text{animal}} \\
& \quad \text{‘three dogs’} \\
\text{b.} & \quad ^*\text{sey} \text{ mali-uy kay} \\
& \quad \text{three } {\text{CL}}_{\text{animal}}\text{-GEN dog} \\
& \quad \text{‘three dogs’}
\end{align*}

Removing the numeral \textit{sey} ‘three’ in (19a) or (19b) yields an ill-formed phrase, not a definite nominal. Third, in some classifier languages phrases that Cheng and Sybesma would take to have the numeral phrase structure, (CL2), might be used as definite nominals:

\begin{align*}
\text{(20) a.} & \quad \text{Twu pwun sensayngnim-kkey tuly-ela! (Korean)}
\end{align*}

\text{\textsuperscript{30}I.e., nominals that seem to result from combining classifiers with nouns, as in (a):}

\begin{align*}
\text{(a) b} & \quad \text{un syu (Cantonese; Cheng & Sybesma 1999, 511)} \\
& \quad \text{CL book} \\
& \quad \text{‘{the, a} book’}
\end{align*}
Some might object that Cheng and Sybesma need not apply their analysis to Chinese nominals to other classifier languages. Regardless of how they can be analyzed, however, the underlined phrases yield counterexamples to the thesis they hold to support the view that phrases with the (CL2) structure must be indefinite: “noun phrases with overt numerals necessarily yield an indefinite interpretation” (ibid., 528).

Moreover, I do not think Cheng and Sybesma’s analysis is correct even for Chinese. The analysis has a serious internal problem. Consider, for example, the Mandarin Chinese counterpart of ‘three books’:

(21) a. san ben shu

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31 Some might object that Cheng and Sybesma need not apply their analysis to Chinese nominals to other classifier languages. Regardless of how they can be analyzed, however, the underlined phrases yield counterexamples to the thesis they hold to support the view that phrases with the (CL2) structure must be indefinite: “noun phrases with overt numerals necessarily yield an indefinite interpretation” (ibid., 528).
three CL book

‘three books’

They take this to have the (CL2) structure:

\[(21) \quad b. \quad \text{[NumP [Num’ san [CLP [CL’ ben shu]]]]}.
\]

This results from combining the numeral *san* ‘three’ with the classifier phrase *ben shu*, which must be definite. So they hold that “the literal translation of ‘three books’ in Chinese is ‘three singular units/instances of book’”, i.e., ‘three of the books’ (2005, 276).32 (21b) cannot mean this unless the classifier phrase amounts to the plural definite nominal ‘the books’. On their analysis, however, the phrase amounts not to the plural ‘the books’ but to the singular ‘the book’, because *ben* is a “singular classifier” (1999, 533).

And their analysis violates syntactic constituency of classifiers. In Chinese, as in other classifier languages, “the numeral and the classifier form one constituent”, as they point out (1999, 536) while quoting Croft (1994, 151). But in (21b), which they propose for (21a), for example, the classifier *ben* does not form a syntactic constituent with the numeral *san*.

4.2. Chierchia’s Restriction

32 They also say “‘A book’ in Chinese languages is literally [one [the book]]” (2005, 284); see also (1999, 539).
To account for the diversity of distribution of bare nominals in various languages, Chierchia (1998) presents an influential alternative to the DP hypothesis. His analysis restricts the hypothesis to a limited range of common nouns. While proponents of the hypothesis take all common nouns to be predicative, Chierchia proposes that there are two different kinds of common nouns: (a) predicative nouns, and (b) those referring to kinds. Predicative nouns, on his proposal, require the aid of determiners to figure as arguments; but kind-referring nouns are argumental, that is, they can by themselves figure as arguments.

Invoking this proposal, Chierchia argues that distribution of bare nouns varies in accordance with what kinds of common nouns a language can have. He distinguishes all human languages into three typological groups by considering (a) whether or not they have predicative nouns ([±pred] languages), and (b) whether or not they have kind-referring, or argumental, nouns ([±arg] languages):

(L1) [+arg, -pred]: languages with argumental but no predicative nouns
(L2) [-arg, +pred]: languages with predicative but no argumental nouns
(L3) [+arg, +pred]: language with both argumental and predicative nouns

Then he derives key features of the three kinds of languages, including distribution of bare nominals. The noun systems of languages of the first group, [+arg, -pred] languages, for example, he argues, must have all the following features:
(a) *Generalized Bare Arguments*: All nouns can occur freely as arguments without determiners.

(b) *Absence of Number Marking System*: Nouns do not take singular or plural forms.

(c) *Mandatory Classifier System*: Nouns cannot directly combine with numerals, but require mediation of classifiers (or measure words).

(d) *Mass Character*: All common nouns are mass nouns.

Using those key features, he identifies classifier languages as belonging to the first group, Romance languages to the second, and Germanic languages to the third.

Now, the four features (a)–(d) cluster together on his analysis. That is, languages belonging to the second or third group cannot have any of the features. So the analysis implies that languages with any of the four features must have all the others as well. Chierchia takes this to be correct, and argues that its correctness supports his analysis (*ibid.*, 358 & 402). But there are various languages that have some of the features, but not all.

First, most, if not all, classifier languages do not have the number marking system, but classifiers are *not* mandatory in many of those languages. Korean, for example, allow some nouns to combine directly with numerals (although the nouns have matching classifiers):

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33 The noun *haksayng* ‘student’ has matching classifiers (e.g., *myeng* CL<sub>human</sub>):
Second, some languages (e.g., Tagalog) have neither the number marking system nor a classifier system, mandatory or not.34, 35 Third, clearly not all languages that lack the number marking system are devoid of count nouns. Although Tagalog nouns do not take singular or plural forms, it is usual to distinguish them into mass and count nouns by considering, e.g., whether or not they can combine directly with numerals (see, e.g., Schachter & Otanes [1972, 112]). Fourth, even classifier languages can draw a syntactic distinction between mass and count nouns. In contemporary Chinese, Japanese, and Korean, for example, one can

(a) haksayng sey myeng
    student three $\text{CL}_{\text{human}}$
    ‘three students’

34See, e.g., Gill (2011) and Schachter & Otanes (1972, 111-113). Gill says “in Tagalog, the noun phrase mansana ‘apple’ may be understood as ‘apple’ (mass), ‘an apple’ (singular), or ‘some apples’ (plural); however, it does not require a classifier in order to occur with a numeral, as in tatlong mansana ‘three apples’” (ibid.).

35Although contemporary Chinese can be plausibly taken to have a mandatory classifier system, it is not so with Archaic or Medieval Chinese, which either lacks a classifier system (Archaic) or has a non-mandatory classifier system (Medieval).
distinguish count nouns from mass nouns by considering whether or not they can combine directly with counterparts of ‘countless’ (see Yi [2009; 2011a; 2011b]). Finally, bare nouns can occur freely in languages without articles, but many such languages (e.g., Latin) clearly lack all the other features, (b)–(d). Chierchia might object that the apparent bare nominals of Latin, which has no articles, have empty or “phonologically null” determiners, but this does not help. Like Longobardi, he holds that “bare arguments” are “restricted by conditions that typically govern the distribution of phonologically null elements” (1999, 356), but Latin bare nominals are not constrained by such conditions.

The features Chierchia attributes to classifier languages, we have seen, do not cluster together. This suffices to falsify his analysis of determiners and bare nouns across languages. Moreover, the analysis yield a wrong account of distribution of Romance and Germanic bare nominals.

Although he restricts the DP hypothesis, he upholds it as far as predicative nouns are concerned. So on his analysis, the hypothesis holds for all count nouns (especially those of Romance and Germanic languages) because they must all be predicative. He accommodates the use of bare plural nominals in English by arguing that pluralization can turn, or “type shift”, count nouns (which he identifies with their singular forms) to kind-referring nouns in languages belonging to the third group, [+arg, +pred] languages. But he accepts Longobardi’s generalization that in Romance and Germanic languages, singular count nouns

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36See his discussion of Slavic (1999, 360ff)
cannot figure as bare arguments (unless shifted to take mass senses). He holds that “In both Germanic and Romance, bare singular arguments are totally impossible (if the noun is not mass)” (1999, 341; my italics). Accordingly, his analysis implies that in languages of the second or third group, singular count nouns, being predicates, “won’t be able to occur bare as arguments” (ibid., 356). As we have seen, however, there are various kinds of Romance and Germanic bare nominal arguments featuring singular count nouns (used in their regular senses). Such are most of the examples given in §3: (13a)–(13b), (14a)–(14b), etc.

Some might take such Romance and Germanic bare nominals to have “null” determiner heads. But this does not help Chierchia, who requires nominals headed by null determiners to be restricted to “positions governed by a lexical head” (ibid., 355). For Romance and Germanic bare singular count nominals, too, can figure in the subject position, as in (13a)–(13b) and (14a)–(14b). Moreover, he holds the “Blocking Principle (‘Type Shifting as Last Resort’)”: if a language has an overt determiner, one cannot use a “null” determiner in the language to shift a noun to a DP equivalent to the DP headed by the overt determiner (1999, 360). He invokes this principle to explain why singular count nouns cannot figure as definite or indefinite arguments in English, which has definite and indefinite articles. So he cannot hold that the bare nominals in, e.g., (13a)–(13b) have a “null” article that turns the singular count nouns to definite DPs.37

37He also holds that bare substantivized adjectives cannot figure at all as arguments (‘*Rich are greedy’ is ill-formed) and explains this using the blocking principle, but even contemporary English does not completely ban them, as we can see in (15a)–(15c).
5. Concluding Remarks

Does a language allow bare nominals? If so, what are the conditions under which they can be used? To answer these questions, it is essential to consider whether the language in question has articles and, if so, what are the conditions under which the articles are used in the language. Languages without articles, which include a majority of languages of the world, tend to resort regularly to bare nominals. Languages with well-developed article systems, by contrast, usually impose some constraints on bare nominals. And the constraints are not uniform because the conditions of use of articles vary in different languages, as Greenberg (1978) discusses in the course of his study of the genesis of gender markers. He considers the diversity of uses of articles in various languages by distinguishing four stages of a process that might eventually turn a language without articles to one with noun markers:

Stage 0: languages without articles but with demonstratives.
Stage 1: languages with definite articles.
Stage 2: languages with non-generic articles.
Stage 3: languages with noun markers.

During the process, definite articles (which mark definite nominals) might emerge from demonstratives, and the resulting article systems might develop into more extensive ones that cover various other uses of nominals (e.g., indefinite nominals) as well to eventually cover
any use of nouns so that articles are simply used as markers for nouns. Thus languages belonging to different stages in the development of article system allow different kinds of bare nominals. For example, Stage 2 languages usually allow generic uses of nominals to figure without articles (or other determiners), but Stage 3 languages do not.38

Considering the diversity in the article system, it would be wrong to begin by asking what are the special conditions under which bare nominals figure. But this is how those who hold the DP hypothesis or its refinements proceed. They assume that nouns (or at least singular count nouns) cannot figure without articles (or other determiners or classifiers or the like) except under special, and specifiable, conditions. This assumption stems from taking a distinct minority of languages of the world, contemporary West European languages, as paradigms for the rest.

Moreover, those who are inspired by the DP hypothesis to attempt to specify special conditions for use of bare nominals begin with hasty generalizations on their use in the very languages they consider paradigms. For example, Longobardi begins his analysis of nominals by “noticing that a singular countable head noun may not occur in Italian [as arguments] . . . without . . . an overt determiner” (1994, 612), and bases his analysis on the generalization that Romance and Germanic singular count nouns cannot figure as bare nominal arguments unless they shift to take mass senses (ibid., 632f). Similarly, Chierchia

38 He notes that “inherently determined” nouns tend to resist the definite article in Stage II languages, and they include kinship terms (ibid., 254ff); for example, “Italian . . . has mio padre and not *il mio padre” (ibid., 256).
holds that “The basic contrastive facts that any theory of bare nominals . . . ought to address are . . . In both Germanic and Romance, bare singular arguments are totally impossible (if the noun is not mass)” (1999, 356). But their generalization is quite wrong. Both Romance and Germanic languages, we have seen, allow bare nominal arguments featuring singular count nouns. Examples of such bare nominals are collected and listed in well-known works on articles, such as Jespersen (1954), from which many of the English bare nominal examples discussed above are drawn.

We can imagine why accounts of bare nominals inspired by the DP hypothesis resort to inadequate accounts of articles of “paradigmatic” languages. Formulating conditions for use of articles even for one such language, English, poses a formidable challenge, as Jespersen (1954) begins by noting in his discussion of the English article system. He says, “The use of the articles presents a great many intricate problems, and it is impossible to give a small number of settled rules available for all cases” (ibid., 404). Accordingly, formulating “a small number of settled rules” for leaving out articles is a challenge that has not been successfully met because of the diversity and intricacy of uses of bare nominals.

I do not think one can square the DP hypothesis with even the diversity and intricacy of bare nominals in English, whose article system provides an important model for proponents of the DP hypothesis. The article system of contemporary English is merely a

39Cheng and Sybesma (1999; 2005) do not reiterate this in their attempt to give a Longobardi-style analysis of Chinese bare nouns, but they take it for granted in assuming the correctness of Longobardi’s analysis of Romance and Germanic bare nominals.

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stage in its emergence in Old English and subsequent development. The generation and
development is a continuous, gradual, and piecemeal process, not a discrete process of
shifting from one rigid system of articles to another, and this is partly responsible for the
diversity and intricacy in the uses (and lack of use) of articles in nominals. One cannot
accommodate the continuous process while holding that articles (or the like) are virtually
essential ingredients of nominals. Giving a proper account of bare nouns requires rejecting
this view, which is ingrained in the DP hypothesis.

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