The illusion of the NP/DP divide
Evidence from Lithuanian

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In this paper, we present syntactic and semantic arguments that, in at least one articleless language (Lithuanian), bare nouns are able to project either NP or DP structures (cf. Franks & Pereltsvaig 2004; Ajibóyè 2006; Pereltsveig 2006). We show that, in some syntactic contexts, Lithuanian bare nouns are only able to receive definite interpretations; in one context, they are only interpreted indefinitely. We then tie these interpretations to the presence or absence of D. Further, we highlight problems with the view that there is a categorical difference between articleless (NP) and articleful (DP) languages (Bošković 2010; Despić 2011), by testing Bošković’s and Despić’s generalizations about NP vs. DP languages on Lithuanian. In both cases, Lithuanian ends up behaving somewhat like an NP language, and somewhat like a DP language. Lithuanian is therefore a counterexample to the NP/DP split posited by Bošković, and must receive a different analysis.

Keywords: definiteness; indefiniteness; determiners; NPs; DPs; scope; aspect

1. Introduction

A long-standing problem in syntax and semantics is whether languages that lack overt articles nevertheless have covert DP structure. Lithuanian provides us with the perfect testing ground. As in many languages, Lithuanian bare nouns may freely act as arguments in a sentence, and receive definite and indefinite interpretations,

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as in (1) (cf. Cheng & Sybesma 1999 on Chinese, Dayal 2003 on Hindi, Pereltsvaig 2007 on Russian, among others).\(^2\)

(1) Lithuanian

a. Žmog-us \textit{atvyk-o}.³
human-M.NOM.SG arrive-PAST.3SG⁴
‘The/a man arrived.’

b. \textit{Atvyk-o} žmog-us.
arrive-PAST.3SG human-M.NOM.SG
‘A/the man arrived.’

There are at least three possibilities for the structure of bare nouns in articleless languages: (i) they are always NPs (Chierchia 1998; Bošković 2010; Bošković & Gajewski 2011), (ii) they are always DPs (Longobardi 1994; Progovac 1998), or (iii) they vacillate between NP and DP structures (Franks & Pereltsvaig 2004; Ajíbóyè 2006; Pereltsveig 2006). We argue for vacillation (iii).

In particular, Bošković argues that there are two different kinds of languages: NP languages (those that lack articles) and DP languages (those that have overt articles). In this paper, we instead argue that Lithuanian nominals vacillate between NP and DP structures, and against the strict NP/DP divide proposed by

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\(^2\) We do not investigate specificity in depth in this paper, as it is far too large a topic to tackle in the same paper as whether or not Lithuanian has covert D. We leave an in-depth investigation for further research.

\(^3\) All data is from original fieldwork, except where noted. All non-English data that is not labeled is Lithuanian.


\(^5\) In §3, we focus on the interpretation of objects. However, our analysis can also account for intransitive subjects. There is a strong preference for proper names to occupy a preverbal position (i)-(ii), as we expect (since they are definite). While both (i) and (ii) are possible, only (i) sounds natural out of the blue. To make (ii) natural and acceptable, one would have to work on context and prosodic focus, both of which fall beyond the scope of this paper.
Specifically, we argue that indefinites are always NPs and that definites are always DPs. We show that certain environments force a definite interpretation and that one environment forces an indefinite interpretation. We then tie these environments to different syntactic structures. Further, we examine Bošković’s generalizations (2010, 2009, 2008a, 2008b, 2007) and Despić’s claims (2011) about the strict NP/DP divide, and show that neither Bošković nor Despić can account for the behaviour of Lithuanian nominals.

Our paper is structured as follows. In §2, we discuss our assumptions about nominal syntax and semantic composition. In §3, we discuss the basic facts in Lithuanian. We show that some environments allow vacillation between indefinite and definite readings, some force definite readings, and one forces indefinite readings. We argue that this is a result of vacillation between NP and DP structures: some environments only permit DP structures, which forces a definite reading; one environment only permits NP structures, which forces an indefinite reading. In all other cases, either structure is permitted, and therefore both interpretations are permitted. In §4, we apply Bošković’s generalizations to Lithuanian. In §4.1, we present those generalizations that appear to show that Lithuanian is an NP language. In §4.2, we present those generalizations that appear to show that Lithuanian is a DP language. In §4.3, we present one generalization that is inconclusive: stacking. In §4.4 we discuss the ramifications of the NP/DP split for Lithuanian. In §5, we briefly discuss Despić’s claims on binding. §6 concludes.

2. Background assumptions

2.1 The function of D

We assume, following Higginbotham (1985), Szabolsci (1987, 1994), Stowell (1989), Longobardi (1994), among others, that determiners create syntactic arguments out of predicates. We further assume that DPs are of type $e$ and NPs are of type $\langle e, t \rangle$ (cf. Pereltsveig 2006).

\[
\text{(2) } \begin{array}{c}
\text{DP}_e \\
D \\
\text{NP}_{\langle e, t \rangle} \\
definite \\
indefinite
\end{array}
\]

6. We allow for the possibility that some languages only have NP bare nouns, or that some only have DP bare nouns. However, in Lithuanian, the data suggests that both structures must be possible.
However, we do not assume that all functional elements that introduce NPs are Ds. Quantifiers and the indefinite article *a*, for example, do not occupy this position, and do not create elements of type *e* (see Gillon 2013). In English, for example, *a* and *the* do not occupy the same position (Epstein 1999; Lyons 1999; Borer 2005). Specifically, *a* occupies some position within NumP, and *the* occupies D (Epstein 1999).

\[
\begin{array}{c}
\text{a. } \\
\text{b. }
\end{array}
\]

We adopt this analysis for English indefinites.

### 2.2 Semantic composition

We also assume, following Chung and Ladusaw (2004), that there are multiple ways to semantically compose an argument. Chung and Ladusaw argue that there are at least two ways to compose an argument. Arguments normally saturate the verb (i.e. they reduce the valency of the verb). However, they argue that arguments do not always saturate the verb. They call this special type of semantic composition *Restrict*. When an argument composes via *Restrict*, “the property argument is interpreted as a restrictive modifier of the predicate” (Chung & Ladusaw 2004:6). The domain of the predicate is thereby restricted to elements that have the property introduced by the argument.

\[
\text{(4) Restrict } (\lambda y \lambda x [\text{feed}'(y)(x)], \text{dog}') \\
= \lambda y \lambda x [\text{feed}'(y)(x) \land \text{dog}'(y)]
\]

(Chung & Ladusaw 2004:5)

*Restrict* does not change the type of the predicate. The verb *feed* is of type \(\langle e, et \rangle\), and the type of *feed* plus a Restrict nominal (‘dog-feed’) is still \(\langle e, et \rangle\). The internal argument of the predicate must still be saturated via some other process; they do this by appealing to existential closure (or by function application of another argument). They argue that existential closure can take place at any point before the event argument is closed off (the VP level).

We assume that Lithuanian DPs compose normally (saturating the verb), but that NPs compose via *Restrict*. This means that in order to be semantically composed as an NP, the NP must remain within the VP.

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7. Other similar analyses will produce the same result, for example semantic incorporation (van Geenhoven 1998). We do not focus on the mechanics here, only on the fact that NPs behave semantically differently from (most) DPs, at least in languages with D.
3. Lithuanian: A case of NP/DP vacillation

Depending on the context, Lithuanian bare nouns can receive indefinite or definite interpretations. In §2.1, we show that in unmarked cases, nominals may be either definite or indefinite. In §2.2, we address the syntactic environments where only a definite or an indefinite interpretation of a bare noun is possible in Lithuanian. In §2.3, we argue that definite nominals are DPs and indefinite nominals are NPs; we also discuss some of our assumptions with respect to the syntax. In §2.4, we examine the semantics of bare nouns in more detail.

3.1 (In)definite interpretations

In unmarked cases, Lithuanian nominals can receive an (in)definite interpretation. We assume that ‘unmarked’ refers to a neutral default form of a particular syntactic construction in a particular language. For example, unmarked word order in most Indo-European languages is SVO.

3.1.1 Imperfective

Verbal aspect is a grammatical category which encodes event types (Rothstein 2004, among many others). There are two kinds of aspect: Internal (a.k.a. Aktionsart or lexical aspect) and external (a.k.a. grammatical aspect).

Internal aspect concerns itself with the classification of events inherent to the lexical meaning of a verb, such as states (sleep, love), activities (run, talk), accomplishments (climb a mountain, push a cart) and achievements (blink, win). External aspect, on the other hand, concerns itself with the duration of an event, i.e. whether an event is ongoing (imperfective) or terminated (perfective). In this paper, we focus on the impact of external aspect on the interpretation of bare nouns (cf. Filip 1999; Sybesma 1999; de Swart 2012).

When a verb surfaces with imperfective aspect, either definite or indefinite interpretations are possible for a bare noun, as in (5). In this case, the judgment is context sensitive.

(5) Jonas valgė obuolį.
    John.NOM.SG eat.PAST.3SG apple.ACC.SG

(i) ‘John ate the apple.’
(ii) ‘John ate an apple.’

3.1.2 Short adjectives

Lithuanian adjectives occur in two guises: short and long. Short adjectives are unmarked while long adjectives are marked with a pronominal affix. When the
nouns are modified by a short adjective, either definite or indefinite interpretations are possible, as in (6). Once again, the judgment is context dependent.\(^8\)

\[(6) \quad \text{Jonas \quad valgę \quad didelį \quad obuolį.} \]
\[\text{John.NOM.SG \quad eat.PAST.3SG \quad big.ACC.SG \quad apple.ACC.SG} \]
\[(i) \quad \text{‘John ate the big apple.’} \]
\[(ii) \quad \text{‘John ate a big apple.’} \]

### 3.1.3 Unmarked WO

Lithuanian has free word order, SVO being the unmarked or neutral. When a sentence surfaces with neutral SVO order, either definite or indefinite interpretations are possible for a bare noun, as in (7). Once again, the judgment is context dependent.

\[(7) \quad \begin{align*}
\text{a. Jonas\quad suko\quad vairq.} \\
\text{John.NOM.SG\quad turn.PAST.3SG\quad wheel.ACC.SG}
\end{align*} \]
\[(i) \quad \text{‘John turned the wheel.’} \]
\[(ii) \quad \text{‘John turned a wheel.’} \]
\[(\text{b. Jonas\quad valgę\quad obuolį.} \\
\text{John.NOM.SG\quad eat.PAST.3SG\quad apple.ACC.SG}) \]
\[(i) \quad \text{‘John ate the apple.’} \]
\[(ii) \quad \text{‘John ate an apple.’} \]

### 3.1.4 Summary

Unmarked WO, unmarked aspect (imperfective), and unmarked adjectives (‘short’ adjectives) all allow (in)definite interpretations of the bare object nominal. As we show in §2.2, any deviation from any of these properties will lead to a definite interpretation only.

### 3.2 Fixed environments

Some environments force an indefinite interpretation on Lithuanian bare nouns, and some force a definite interpretation. Thus far, we have found only one example of the former, and five examples of the latter.\(^9\) Bare nouns are obligatorily associated with a definite interpretation in the following cases: (i) when the verb is

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\(^8\) Languages that have a short/long adjective distinction do not pattern uniformly. Judgments in Serbian/Croatian (Aljović 2002) are unlike judgments in Lithuanian. We leave this for further research.

\(^9\) As we will see, in one case, judgments vary somewhat. We focus on the judgments of the second author.
perfective, (ii) when the verb is pluractional, (iii) when a noun is modified by a superlative adjective, (iv) when a noun is modified by a pronominal adjective, and (v) when the sentence has a marked word order (see Armokaite & Gillon in prep for details). Bare nouns are obligatorily associated with an indefinite interpretation in a copular construction, but only when the bare noun follows the verb.

In what follows, we address each of the environments briefly, beginning with those that induce an obligatory definite interpretation.

3.2.1 Perfective aspect
Perfectivity in Lithuanian is often attained via verbal prefixes, as shown in the minimal pairs in (18).10

(8) a. suk-ti
turn-INF
‘to turn (imperfective)’

b. ger-ti
drink-INF
‘to drink (imperfective)’

c. pa-suk-ti
PREF-turn-INF
‘to turn (perfective)’

d. iš-ger-ti
PREF-drink-INF
‘to drink (perfective)’

Internal arguments of imperfective prefixless verbs allow for either an indefinite or definite interpretation, as in (19), whereas internal arguments of perfective transitive verbs receive definite interpretation, as in (20) (cf. Filip 1999, Sybesma (1999) and de Swart 2012).

(9) a. Jonas suko vairą.
John.nom.sg turn.past.3sg wheel.acc.sg
(i) ‘John turned a wheel.’
(ii) ‘John turned the wheel.’

b. Jonas valgė obuolį.
John.nom.sg eat.past.3sg apple.acc.sg
(i) ‘John ate an apple.’
(ii) ‘John ate the apple.’

10. For ease of exposition, we abstract away from the complexity of aspectual expressions in Balto-Slavic. We are aware that the issue of how perfectivity is attained is far more complex than simply adding a prefix.
We should note here that for some speakers, that there is only a strong preference for a definite interpretation. However, for other speakers, including the second author of this paper, the definite interpretation is the only available one. For those speakers where there is only a preference, a different analysis will be required than the one set forth here. Note that any analysis of the grammar of the speakers with a strong preference for definiteness will not be able to appeal to a definiteness–perfectivity correlation (as in Filip 1999: 228–229 and de Swart 2012: 767–768).

Within the VP, if the verb is imperfective, the internal argument may receive either interpretation. If the verb is perfective, the internal argument will only receive a definite interpretation.

3.2.2 Pluractionality

Verbs in Lithuanian may take a pluractional suffix -inė-, as in the minimal pairs in (11). This pluractional marker signals plural (distributive) events.\(^\text{12}\)

\begin{align*}
(11) \quad \text{a.} & \quad \text{trūk-ti} \\
& \quad \text{burst-INF} \\
& \quad \text{‘to burst’}
\end{align*}

\begin{align*}
\text{b.} & \quad \text{trūk-inė-ti} \\
& \quad \text{burst-PLUR-INF} \\
& \quad \text{‘to keep bursting’}
\end{align*}

\[\text{11.} \quad \text{For those speakers who allow both interpretations, definite interpretations of (20) are still preferred. Indefinite interpretations are downright ungrammatical for some speakers, including the second author of this paper. We hypothesize that some judgments may be affected by a particular subclass of Aktionsart or lexical aspect in verbs (not discussed in this study). We leave the issue of interaction between grammatical aspect and lexical aspect, and their effects on the definiteness of the internal object for some speakers, for further research.}\]

\[\text{12.} \quad \text{Pluractionality in Lithuanian is a complex matter and requires a detailed discussion that does not bear on the key issues discussed in this study. For more details on Lithuanian pluractionality, see Armoskaite & Sherkina-Lieber (2008) and Armoskaite (2012).}\]
c. *bėgti*  
   *run-INF*  
   ‘to run’

d. *bėginė-ti*  
   *run-PLUR-INF*  
   ‘to keep running (around)’

Without the pluractional marker on a transitive verb, singular bare nouns may receive either a definite or indefinite interpretation, as in (12).

(12) *Jonas suko raktą.*  
    John.NOM.SG turn.PAST.3SG key.ACC.SG  
    (i) ‘John turned a key.’  
    (ii) ‘John turned the key.’

However, this ambiguity disappears in the presence of the pluractional marker -*inė*:- singular bare nouns can only receive a definite interpretation with pluractional marking, as in (13).

(13) *Jonas suk-inė-jos raktą.*  
    John.NOM.SG turn-PLUR-PAST.3SG key.ACC.SG  
    (i) ≠‘John kept turning a key.’  
    (ii) ‘John kept turning the key.’

3.2.3 Superlative adjectives

Adjectives in Lithuanian may be simplex or they may be inflected by the comparative (suffix -*esn*-) or superlative (suffix -*iaus*-). When a noun is modified by a simplex or comparative adjective, it may receive either a definite or indefinite interpretation, as in (14).

(14) a. *Jonas suko gerq raktą.*  
    John.NOM.SG turn.PAST.3SG good.ACC.SG key.ACC.SG  
    (i) ‘John turned a good key.’  
    (ii) ‘John turned the good key.’

b. *Jonas suko ger-esn-i raktą.*  
    John.NOM.SG turn.PAST.3SG good-comparative.ACC.SG key.ACC.SG  
    (i) ‘John turned a better key.’  
    (ii) ‘John turned the better key.’

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13. When the object is plural, different results obtain. We leave plural objects for further research.
However, when the noun is modified by a superlative adjective, only a definite interpretation is allowed, as in (15).

(15) Jonas suko ger-iaus-ią raktą.  
John.NOM.SG turn.PAST.3SG good-super-ACC.SG key.ACC.SG

(i) ≠ ‘John turned a best key.’  
(ii) ‘John turned the best key.’

3.2.4 Pronominal adjectives

Objects are interpreted as definite when modified by pronominal adjectives, as in (16) (see §2.1.2 for unmarked adjectives).

John.NOM.SG turn.PAST.3SG crooked-ACC.SG-PRON.ACC.SG wheel.ACC.SG

(i) ‘John turned the crooked wheel.’  
(ii) ≠ ‘John turned a crooked wheel.’

child.M.NOM.SG eat.PAST.3SG big-ACC.SG-PRON.ACC.SG apple.ACC.SG

(i) ‘The child ate the big apple.’  
(ii) ≠ ‘The child ate a big apple.’

3.2.5 Marked WOs

SVO is the neutral word order in Lithuanian (Ambrazas 1997; cf. Song 2012, inter alia). When the word order is SVO, objects may be interpreted as either definite or indefinite (see (7). If the order is OVS, the object obligatorily receives a definite interpretation, as in (17).14

(17) Obuolį valgė vaikas.  
apple.ACC.SG eat.PAST.3SG child.M.NOM.SG

(i) ‘It was the apple that the child ate.’  
(ii) ≠ ‘It was an apple that the child ate.’  
(Literally: ‘Apple ate child.’)

14. A reviewer asks if a specific indefinite reading is possible here; it is very strange, if at all possible, for the fronted object to be interpreted as a specific indefinite. This strongly suggests that indefinites need support to be interpreted as specific. (The role of prosodic focus, for example, remains to be established.)
If the order is OSV, the object receives a definite interpretation, as in (18).

(18) \textit{Obuolį vaikas valgė.} \\
\textit{apple.ACC.SG child.M.NOM.SG eat.PAST.3SG} \\
(i) ‘What the child did with the apple is to eat it.’ \\
(ii) ≠ ‘What the child did with an apple is to eat it.’ \\
(Literally: ‘Apple child ate.’)

3.2.6 Postverbal subjects in copular constructions

Unlike all of the above environments, if the bare noun is the postverbal subject of a copular construction, it must receive an indefinite interpretation, as in (19).

(19) \textit{Ten buvo didel-ė kat-ė.} \\
\textit{there be.PAST.3SG big.F.NOM.SG cat.F.NOM.SG} \\
‘There was a big cat there.’

Preverbally, bare nouns in copular constructions can receive either interpretation, as in (20).

(20) \textit{Kat-ė buvo didel-ė.} \\
\textit{cat.F.NOM.SG be.PAST.3SG big.F.NOM.SG} \\
‘The cat was big.’ \\
‘A cat was big.’

3.2.7 Summary

The following contexts force a definite interpretation on singular objects: Perfectivity, pluractionality, superlative/pronominal adjectives and marked word orders. (For some speakers, perfective aspect only conditions a strongly preferred definite interpretation.) There is only one known context that forces an indefinite interpretation: Postverbal subjects of copular constructions.

3.3 The syntax of bare nouns

We argue that the semantics of bare nouns is tied to their syntax. Specifically, we argue that indefinitely interpreted bare nouns are NPs and definitely interpreted bare nouns are DPs. This means that in most contexts, bare nouns can freely choose between NP and DP syntax.

(21) a. \begin{tikzpicture} 
\node (root) {DP} 
child {node (d) {D}} 
child {node (np) {NP_{<\ell,\ell>}}}; 
\end{tikzpicture} \\
\textit{definite} \\
b. \begin{tikzpicture} 
\node (root) {NP_{<\ell,\ell>}}; 
\end{tikzpicture} \\
\textit{indefinite}
For the purposes of this paper, NP really means “smaller than DP”. It is possible (and indeed likely) that at least in some instances bare nouns are in fact instances of NumP (see §2.1).

In the sections that follow, we provide the syntax for each environment that forces a definite or an indefinite reading.

3.3.1 Perfective aspect
As noted above, perfective forces a definite interpretation on the object for some speakers (including the second author of this paper). For these speakers, (27c) is ungrammatical.

(22) a. AspP 
Asp VP 
PERF V DP 

b. AspP 
Asp VP 
IMPERF V DP/NP 

3. We thank an anonymous reviewer for pointing out Pereltsveig’s (2006) discussion on small nominals. However, we do not include an extensive discussion of her views or data in our paper for two reasons. On the one hand she is of an opinion that different kinds of nominals can coexist within the same language, which is essentially in line with our views. On the other hand, even though we arrive at a similar conclusion, our argumentation is based on different subsets of data and claims. Specifically, we explore the robustness of data and claims that are relevant for an argument – or lack thereof – for an NP/DP divide between languages. Meanwhile, Pereltsveig (2006) is interested in the role of phi features with respect to D. She argues that phi features encode referentiality, which conditions the projection of D. While we find her arguments interesting and compelling for Russian, they do not carry over to Lithuanian. For example, at least a third of her paper is built on agreement contrasts between verbs and their arguments. If the verbs agree with their arguments, then phi features encode the referentiality needed to project D. If the verb is in the neutral non-agreeing form, then the nominals are not DPs. The problem is that such contrast does not manifest in Lithuanian. Lithuanian verbs do not have the non-agreeing forms that would be the equivalent to Russian data. (The second author of this paper is a bilingual speaker of Russian, and notes that there are participles in Lithuanian that contrast in the inventory of their phi-features, but Pereltsveig (2006) talks about verbs.) Thus, the relevance of phi-features in Lithuanian at the very least does not have the same prominence as in Russian. It may very well be that there are further relevant differences in the phi feature manifestations between Lithuanian and Russian, but they fall beyond the scope of this study.
3.3.2 Pluractionality
We argue that pluractionality forces a DP structure on singular objects of pluractional verbs, and this is what results in a definite interpretation. The presence of pluractionality in Asp forces the singular object to project DP structure (23)a. A lack of pluractionality allows the object to have either NP or DP structure (23)b. The structure in (23)c is illicit for singular objects.

(23)    a. AspP
       /   \   \
  Asp    VP
    /   \ / \ \
PLUR  V  DP

b. AspP
       /   \   \
  Asp    VP
    /   \ / \ \
   Ø    V  DP/NP

c. * AspP
       /   \   \
  Asp    VP
    /   \ / \ \
PLUR  V   NP

3.3.3 Superlative adjectives
We argue that superlative adjectives are split across two heads: A and D. The superlative morphology is hosted in D. This D forces a definite interpretation on the nominal.

(24)    DP
       /   \   \\n  D     DegP
       /   \   \\n  Deg    AP
       /   \   \\n-iusia  A  NP

3.3.4 Pronominal adjectives
We argue that nouns modified by pronominal adjectives have a D as well. This accounts for the fact that these nouns must receive a definite interpretation.

(25)    DP
       /   \   \\n  D     AP
       /   \   \\n  -ji   A  NP

3.3.5 Marked WOs
We argue that if a bare noun object occupies a higher position (above the VP), it must project DP structure. This is because only DPs can be interpreted higher than
a VP. NPs must be composed within the VP (since Restrict can only take place within the VP; see §2.2).

(26)

3.3.6 Postverbal subjects in copular constructions
We argue that only NPs can surface in postverbal position in copular constructions. (Recall that postverbal subjects in general prefer NP structure (1).)

(27)

3.3.7 Summary
We argue that bare nouns can vacillate between NP and DP structures; however, in some environments, bare nouns may only surface as DPs or NPs.

3.4 Semantic evidence
Our analysis makes a number of predictions. First, we predict that in certain contexts, bare nouns should always take widest scope (§3.4.1). We also predict that in vacillation contexts, either narrow or wide scope is possible (§3.4.2). Finally, we predict that bare nouns should obey the law of contradiction, except in cases where the bare noun must surface as an NP (§3.4.3).

3.4.1 Definite BN: Widest scope only
We predict that in the definite cases, the bare nouns should only get wide scope. For example, for those speakers that require a definite interpretation for an object of a perfective-marked verb, the object should only get wide scope.\textsuperscript{16} This prediction is borne out. The internal argument within a VP marked by perfective aspect can only take wide scope with respect to negation, as in (28).

\textsuperscript{16} For those speakers with only a strong preference, we predict that the bare object should be able to receive wide or narrow scope.
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(28) *Jonas ne-pa-suko vairo.
    John.NOM.SG NEG-PREF-turn.PAST.3SG wheel.GEN.SG
    (i) ‘John did not turn the wheel.’
    (ii) ‘John did not turn any wheel.’

Similarly, an internal argument modified by a pronominal adjective also can only take wide scope with respect to negation, as in (29).

(29) *Vaikas ne-valgė did-žio-jo obuolio.
    child.M.NOM.SG NEG-eat.PAST.3SG big-gen.sg PRON GEN.SG apple.GEN.SG
    (i) ‘The child did not eat the big apple.’
    (ii) ‘The child did not eat any big apple.’

In the interest of space, the two above examples will suffice. Note that these scope generalizations also hold for pluractional, superlative, and marked WO environments.

3.4.2 (In)definite BN: Either wide or narrow scope
We predict that in the cases of vacillation, bare nouns should be able to take either wide or narrow scope. This prediction is borne out. For example, the internal argument within an imperfective (unmarked) VP may take either wide or narrow scope with respect to negation, as in (30). The interpretation is context sensitive.

(30) *Jonas ne-suko vairo.
    John.NOM.SG NEG-turn.PAST.3SG wheel.GEN.SG
    (i) ‘John did not turn the wheel.’
    (ii) ‘John did not turn any wheel.’

Similarly, an internal argument modified by a short adjective may also take either wide or narrow scope with respect to negation, as in (31).

(31) *Vaikas ne-valgė didel-io obuolio.
    child.M.NOM.SG NEG-eat.PAST.3SG big-gen.sg apple.GEN.SG
    (i) ‘The child did not eat the big apple.’
    (ii) ‘The child did not eat any big apple.’

Note that these scope generalizations also hold for the unmarked WO (SVO).

3.4.3 Indefinite BN: Preferred narrow scope
We predict that with indefinite bare nouns, only narrow scope will be available. However, while narrow scope is strongly preferred, wide scope may also be available, as in (32). Some speakers find wide scope of *katès ‘cat’ questionable.
Given that we have not found more indefinite environments yet, it is difficult to draw any conclusions. We leave this for further research.

3.4.4 Law of contradiction

We argue that in Lithuanian (definite) DPs are of type $e$ and (indefinite) NPs are of type $\langle e, t \rangle$. This analysis predicts that nominals that must be indefinite/surface as an NP will behave differently from those that are allowed to (or must) surface as a DP.

Since elements of type $e$ obey the law of contradiction (Russell & Whitehead 1910–13, Barnes 1969, Heim & Kratzer 1998; Lübner 2002), we can use this law as a test for the presence of D. We predict that definite bare nouns and bare nouns that vacillate between indefinite and definite readings should obey the law of contradiction. This is because they can project a D. This is borne out: in most cases, bare nouns obey the law of contradiction.

We further predict that bare nouns that can only receive an indefinite reading should never obey the law of contradiction. This is because NPs are not of type $e$, but rather remain of type $\langle e, t \rangle$. This is also borne out. In the one case that prefers indefinite readings (postverbal copula cases), bare nouns do not obey the law of contradiction.

17. It is also the case that nouns that come out of the lexicon as type $e$ (as argued by Chierchia 1998 for Mandarin Chinese) would obey the law of contradiction. However, as seen below, not all bare nouns in Lithuanian obey the law of contradiction. They cannot uniformly come out of the lexicon of type $e$. We therefore reject Chierchia’s analysis for Lithuanian.
3.5 Summary

We argue that bare nouns in many constructions vacillate between DP (definite) and NP (indefinite) structures. We further argue that certain constructions force a DP structure, and that one construction forces an NP structure. The presence of D was confirmed by two tests: scope and the law of contradiction. We predicted that in those environments that force DP structure, bare nouns should take wide scope, which was shown to be true. We also predicted that the law of contradiction will not be obeyed by bare nouns that can only receive indefinite interpretations. This was shown to be true: the law of contradiction is always obeyed, except in the one environment where bare nouns are forced to be NPs.

4. Lithuanian: Alternative testable generalizations à la Bošković

An alternative analysis to NP/DP vacillation is one where there is a strict cross-linguistic divide between languages that only have NPs and languages that can also have DPs. Bošković (2010) and Despić (2011) have argued for such a divide. In this section, we address the Bošković generalizations that are applicable to Lithuanian. Below, we provide a table of the most relevant generalizations, highlighting those that can be tested in Lithuanian.

Table 1. Bošković’s generalizations and their applicability to Lithuanian

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Testable in Lt?</th>
</tr>
</thead>
<tbody>
<tr>
<td>adjunct extraction</td>
<td>yes</td>
</tr>
<tr>
<td>superiority effects</td>
<td>yes</td>
</tr>
<tr>
<td>exhaustivity of possessives</td>
<td>yes</td>
</tr>
<tr>
<td>focus adjacency</td>
<td>yes</td>
</tr>
<tr>
<td>negative concord with complex constituents</td>
<td>yes</td>
</tr>
<tr>
<td>neg raising</td>
<td>yes</td>
</tr>
<tr>
<td>possessor/adjective order</td>
<td>yes</td>
</tr>
<tr>
<td>LBE</td>
<td>yes</td>
</tr>
<tr>
<td>transitive nominals</td>
<td>yes</td>
</tr>
<tr>
<td>majority superlative reading</td>
<td>yes</td>
</tr>
<tr>
<td># morphology</td>
<td>yes</td>
</tr>
</tbody>
</table>

(Continued)

18. Not all of Bošković’s generalizations are testable in Lithuanian.
When we apply the relevant generalizations to Lithuanian, the language looks split: some of the tests classify it as an NP language and some classify it as a DP language. This at the very least suggests that generalizations do not hold across all articleless languages. For Bošković, many of these are tendencies. We take a stronger stance: we expect any given NP language to fall more on the NP side of his generalizations. This is not the case in Lithuanian, which falls midway between NP and DP languages. The results in Lithuanian are therefore a problem for Bošković.

Whenever we discuss Bošković’s generalizations, we discuss how obligatory he expects each one to be. In the case of Lithuanian, some of these generalizations do not disambiguate between NP and DP in any relevant way; however, for completeness’ sake, we show the relevant data. Some generalizations, however, are more crucial to Bošković’s story. We highlight these, showing that some of them point to NP structure and some to DP structure. These last ones are problematic for Bošković’s analysis.

First, we discuss those generalizations that make Lithuanian look like an NP language; then those that make it look like a DP language. Finally, we address one generalization – stacking – that would classify Lithuanian as both an NP and a DP language simultaneously. Table 2 provides an overview of the results discussed in detail below.

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Table 1. (Continued)

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Testable in Lt?</th>
</tr>
</thead>
<tbody>
<tr>
<td>scrambling</td>
<td>yes\textsuperscript{19}</td>
</tr>
<tr>
<td>inverse scope</td>
<td>yes</td>
</tr>
<tr>
<td>stacking</td>
<td>yes</td>
</tr>
<tr>
<td>radical pro drop</td>
<td>no</td>
</tr>
<tr>
<td>polysynthesis</td>
<td>no</td>
</tr>
<tr>
<td>second position clitics</td>
<td>no</td>
</tr>
<tr>
<td>head internal relatives</td>
<td>no</td>
</tr>
</tbody>
</table>

\textsuperscript{19} In theory, scrambling is testable in Lithuanian; however, Bošković provides too vague a description of what he means by ‘scrambling’ for it to be of any use in Lithuanian (or in any language, for that matter). We therefore omit it in this paper. Arguments in Lithuanian can occupy more positions than they can in English, but it is unclear what this means, and whether this is related to case rather than the putative lack of D.
Table 2. Bošković’s NP/DP generalizations applied to Lithuanian

<table>
<thead>
<tr>
<th>Generalization</th>
<th>NP</th>
<th>DP</th>
<th>Lithuanian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithuanian behaves like NP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adjunct extraction</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>superiority effects</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>interpretation of possessives: exhaustivity</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>focus adjacency</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>negative concord with complex constituents</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>neg raising</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>possessors and adjective variable order</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Lithuanian behaves like DP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>left branch extraction</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>transitive nominal can have two genitives</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>obligatory # morphology</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>majority reading of most</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>inverse scope</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>unclear generalization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stacking</td>
<td>yes</td>
<td>no</td>
<td>yes and no</td>
</tr>
</tbody>
</table>

In what follows, we do not attempt to explain why certain languages pattern the way that they do. We are uncertain why many of these facts would be the relevant ones for determining if a bare noun has structure or not.

4.1 Lithuanian as an NP language

In this section, we examine all of Bošković’s generalizations that suggest that Lithuanian is an NP language. The generalizations examined are adjunct extraction, superiority effects, exhaustivity, focus adjacency, negative concord, neg raising, and possessor/adjective order.

4.1.1 *Adjunct extraction from NP*

Adjunct extraction from NP has long been considered to be ungrammatical in English (Chomsky 1986). Chomsky originally characterized this in terms of Barriers and Minimality: NPs are barriers to movement.20

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20. According to Chomsky (1986), the movement of an adjunct from an NP leaves behind an ungoverned trace. This is a violation of the Empty Category Principle.
(35) a. Peter met girls from this city.
   b. *From which city did Peter meet girls?

On the other hand, NP languages freely allow adjunct extraction from NP.

(36) SC (Bošković 2010: 3)

Iz kojeg gradai je Petar sreo [djevojke t]
from which city is Peter met girls
'From which city did Peter meet girls?'

(37) Russian (Bošković 2010: 3)

Iz kakogo goroda ty vstrechal [devushek t]?
from which city you met girls
'From which city did Peter meet girls?'

Bošković claims that only NP languages allow adjunct extraction out of NPs, and that this ability is tied to the absence of a DP projection. His account is based on the assumption that DP is a phase, and that adjuncts are adjoined to NP. Due to anti-locality constraints, in a DP language, adjuncts cannot move into SpecDP and therefore escape the phase. In an NP language that lacks a DP layer, no such problem should arise.

Bošković characterizes this generalization as in (38).

(38) Only languages without articles may allow adjunct extraction out of TNP.21

This means that if a language allows adjunct extraction, then it is an NP language. That is, an NP language may or may not allow adjunct extraction, but a DP language never will, according to Bošković.

Adjunct extraction from NP is licit in Lithuanian, in line with Bošković’s hypothesis on NP languages.

(39) Iš kurio miesto Petras sutiko [merginas tj]?
from which city Peter met girls
'From which city did Peter meet the girls?'

(Default prosodic focus on ‘which’; echo question interpretation)

Although Lithuanian is not a counterexample to this generalization, it appears that some varieties of English are. Adjunct extraction is not ungrammatical for all speakers of English. With the echo question intonation, (40)b is far more

21. TNP = traditional NP, which includes DPs and NPs.
acceptable than without; further, (40)c is grammatical for a subset of speakers of English.22

(40)  a. Peter met girls from this city.
    b. ?From which city did Peter meet girls? (as echo question)
    c. *Which city did Peter meet girls from? (as echo question or not)

The lack of uniformity in English judgments is problematic for any analysis that suggests that there is a fundamental difference between NP and DP languages. Further, Lithuanian might be a true counterexample if echo questions do not count for this generalization. And as we see in §4.2.1 below, this generalization shares an explanation with LBE (something that Lithuanian lacks).

4.1.2 Superiority effects
For those languages that allow multiple wh-fronting, NP languages (such as Serbian/Croatian) do not show superiority effects (33). Most DP languages do, such as Bulgarian (34).23

(41) SC (Bošković 2010: 5)
    a. Ko koga vidi?
       who whom sees
       ‘Who sees whom?’
    b. Koga ko vidi?
       whom who sees
       ‘Who sees whom?’

(42) Bulgarian (Bošković 2010: 5)
    a. Koj kogo vižda?
       who whom sees
       ‘Who sees whom?’
    d. *Kogo koj vižda?
       whom who sees

Bošković characterizes this generalization as in (43).

22. In order to get these judgments, we asked native speakers of English – linguists and naïve speakers. The judgments were split fairly evenly between those that felt (40)c was completely ungrammatical and those who thought it was acceptable with an echo-question interpretation (the interpretation the Lithuanian equivalent also receives). The native English speaker author also finds both (40)b, c acceptable, with echo question intonation and semantics. ((40)c also admits a non-echo question interpretation.)

23. Hungarian is an exception that we do not discuss here.
MWF languages without articles do not display superiority effects in examples like (41). (adapted from Bošković 2010: 5)

That means that if a language has superiority effects, it must be a DP language and that if a language has no articles, it will not have superiority effects.

Bošković (2007) ties this to movement to SpecCP: he claims that only DP languages move their wh-phrases to SpecCP. The DP structure and the CP structure are tied for him: DPs must move to SpecCP (due to CP/DP parallelism), but NPs move to somewhere lower in the clause. Movement to this position is, according to him, driven by focus. He assumes that SpecCP involves superiority, but a lower position does not.24

As Bošković predicts, Lithuanian lacks any superiority effects in multiple wh-fronting.25

(44) a. Kas ką mato?
   who.nom whom/what.acc sees
   ‘WHO sees whom?’

b. Ką kas mato?
   whom/what.acc who.nom sees
   ‘Who sees WHOM?’

Thus, Lithuanian is in line with this generalization.

4.1.3 Interpretation of possessives

In English, possessives (usually) presuppose that the possessor has exactly the number of objects described by the numeral (Partee 2006).

(45) Zhangsan’s three sweaters

This presupposition does not arise in NP languages.

(46) Mandarin (Bošković 2010: 11)

Zhangsan de [san jian maoxianyi]
Zhangsan de<sub>poss</sub> three cl. sweater
‘Zhangsan’s three sweaters’

---

24. One question that arises from this is if there is a parallelism between DP and CP is why don’t NP languages lack CP altogether? It is also not clear why a lower position should be less concerned with superiority than CP would be.

25. Both utterances are grammatical; however, they differ in focus: whatever is leftmost gets the prosodic focus. Bošković does not talk about the prosody or focus of these examples, but it is relevant to the interpretation, when superiority does not apply.
If D is always associated with exhaustivity, then this is evidence of a lack of a DP projection. Bošković characterizes this generalization as in (47).

(47) Possessors may induce an exhaustivity presupposition only in DP languages.

This means that if a language has possessors that are associated with an exhaustivity presupposition, it must be a DP language. A language that lacks that exhaustivity may be of either type.

As Bošković predicts, Lithuanian possessives lack any presupposition of exhaustivity.

(48) a. Jono trys megztiniai
    John.gen three sweaters

b. Trys Jono megztiniai
    three John.gen sweaters.nom
    ‘three sweaters of John’

In (48)a and b above, John may own more than three sweaters. Thus, Lithuanian is not a counterexample to this generalization.

However, some varieties of English might be a counterexample. Not all speakers agree that possessives are associated with a presupposition of exhaustivity. In fact, for many speakers, these are only associated with an implicature of exhaustivity. For the numeral one, the presupposition never arises, but even with three, the exhaustivity can be canceled.

(49) a. Zhangsan's one sweater is ugly and his other one is even uglier.

b. %Zhangsan's three sweaters are ugly and his other three are even uglier.

We see yet again that the judgments on English are not conclusive. It is unclear, then, whether this can be reliably used as a distinction between NP and DP languages. However, as mentioned in §4.1.1, the generalizations in §4.2 are more important for Lithuanian, and we focus on those.

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26. That is, unless possessives have different structures in different languages. Further, not all languages with D involve definiteness/exhaustivity (Matthewson 1998; Gillon 2013).

27. It is unclear why speakers prefer (b) over (a). We leave this issue for further research.
4.1.4 Focus adjacency

In languages with focus movement, DP languages require their focused elements to be adjacent to the verb, as in Bulgarian (50). NP languages do not, as in Serbian/Croatian (51).

(50) Bulgarian (Lambova 2004)
   a. *KARTINATA Ivan podari na Maria
      painting-the (foc) Ivan give-as-a-present-past.3sg to Maria
   b. KARTINATA podari Ivan na Maria
      painting-the (foc) give-as-a-present-past.3sg Ivan to Maria
      ‘Ivan gave Maria the painting as a present.’

(51) SC (Stjepanović 1999)
   JOVAN (Petar) savjetuje.
   Jovan.acc Petar.nom advises
   ‘Petar is advising Jovan.’

Bošković does not provide an explanation for these facts, yet he states the generalization as in (52).

(52) Elements undergoing focus movement are subject to a verb adjacency requirement only in DP languages. (Bošković 2010: 11)

That is, if a language enforces a focus-verb adjacency requirement, it must be a DP language. A language that has no such requirement could be of either type.

Lithuanian lacks a focus adjacency requirement. However, Lithuanian seems to have the opposite requirement, in that the verb-adjacent position is dispreferred. Why the position of the verb should matter, or why focus adjacency should have anything to do with D, is unclear.28

(53) a. PAVEIKSLĄ Ivanas davė Marijai
    painting Ivan gave Mary
    ‘Ivan gave the PAINTING to Mary.’
   b. ?PAVEIKSLĄ davė Ivanas Marijai
    painting gave Ivan Mary
    ‘id’

28. We hypothesize (Armoskaite & Gillon in prep.) that the aspectual specification of a verb interacts with the interpretation of its arguments. However, Bošković does not address the relation between aspect and the D layer, even though such discussion has a long tradition; for example, in the literature on Hungarian (Szabolsci 1984, 1986; Harlig 1989; Kiss 1995; Maleczki 2001, among others).
It is unclear how Bošković would explain either his own or the Lithuanian restrictions. Ultimately, however, Lithuanian is not a counterexample to the generalization, although the generalization lacks a clear motivation.

4.1.5 Negative concord with complex negative constituents

According to Bošković, some DP languages with negative concord force a double negative reading. This occurs when there are two negative elements and one of them is a complex negative constituent.

(54) Italian (Bošković 2010:9)
   a. *Nessuno ha letto niente.*
      nobody has read nothing
      ‘Nobody has read anything.
      ‘Nobody has read nothing.’ (double negation)
   b. *Nessuno studente ha letto nessun libro/niente.*
      no student has read no book/nothing
      ‘No student has read no book/nothing.’ (double negation)
      ≠ ‘No student has read any book/anything.’

NP languages are not required to have such a restriction. Bošković claims that Serbian/Croatian, Russian, Polish, Ukranian, Japanese, Korean and Turkish all lack this restriction (but provides no data) and characterizes this generalization as in (55).

(55) The negative concord reading may be absent with multiple complex negative constituents only in DP negative concord languages.
     (Bošković 2010:9)

In Lithuanian, negative concord is found with simple and complex negative items, as predicted by Bošković.

(56) a. *Aš ne-mačiau nieko.*
   I neg-saw nothing
   ‘I did not see anything.’
   (Literally: I not saw nothing)
   b. *Aš ne-mačiau jokių studentų.*
   I neg-saw any/none students
   ‘I did not see any students.’
   (Literally: I not saw any/none students)

29. According to Bošković, Brazilian Portuguese, Hebrew, and Romanian all lack this restriction. This means that this generalization cannot be used to disambiguate between NP and DP languages.
When there are multiple negative items in a clause, only the negative concord reading is obtained.

(57) a. Nė vienas studentas nieko ne-matė.  
    not one student nothing NEG-saw  
    ‘No student saw anything.’  
    (Literally: Not a single student not saw nothing.)  

b. Joks studentas nieko ne-matė.  
    any student nothing NEG-saw  
    ‘No student saw anything.’  
    (Literally: No student not-saw nothing.)

Thus, Lithuanian is not a counterexample to this generalization.

4.1.6 Negative raising

Some languages allow negation to be interpreted in either the matrix or embedded clause. For example, in (58)a, the negation can be interpreted in the lower clause (the reading in (i)). Believe is a verb that allows neg raising; claim does not (58)b.

(58) a. John doesn’t believe that Mary is smart.  
    (i) John believes that Mary is not smart  
    (ii) John has no belief about Mary’s intelligence  

b. John didn’t claim that Mary is smart.  
    (i) John made no claim about Mary’s intelligence  
    (ii) ≠ John claimed that Mary is not smart

We can test for the presence of the negation in the lower clause via NPI licensing. In (59)a, the NPI until is not licensed. In (59)b, it is. Crucially, until is also licensed in a neg raising environment (59)d, but not in the non-raising environment (59)c.

(59) a. *John left until yesterday.  
    b. John didn’t leave until yesterday.  
    c. *John didn’t claim that Mary would leave until tomorrow.  
    d. John didn’t believe that Mary would leave until tomorrow.

According to Bošković, negative raising is disallowed in NP languages.30,31

30. But only for NPI licensing purposes; negative raising is allowed for semantic purposes (i).

(i) SC (Bošković 2010: 5)  
Ivan NEG believes that God exists  
'Ivan believes that God doesn’t exist.'

31. The reason is complicated, having to do with the modal base combining with a definite article or some other quantificational element. In an NP language, the modal base can only combine with the other quantificational element (a universal quantifier).
The illusion of the NP/DP divide

(60) SC (Bošković & Gajewski 2011)
   a. *Marija ju je posjetila najmanje dvije godine. 32
      ‘Mary visited her in at least two years.’
   b. Marija je nije posjetila najmanje dvije godine.
      ‘Mary has not visited her in at least two years.’
   c. *Ivan ne vjeruje [da ju je Marija posjetila najmanje dvije godine].
      ‘Ivan does not believe that Mary has visited her in at least two years.’

Bošković characterizes this generalization as in (61).

(61) Languages without articles disallow NR, and languages with articles allow it.
     (Bošković 2010:5)

Lithuanian does not allow neg raising. To see this, we first must look at the behaviour of an NPI in matrix clauses. For example, jok- ‘any’ cannot be used in an affirmative context.

     see-past.1sg any-acc.pl rat-acc.pl pond-loc.sg
     ‘I saw any rats in the pond.’
   b. Ne-mač-iau jok-ių žiurk-ių prūd-e.
      neg-see-past.1sg any-gen.pl rat-gen.pl pond-loc.sg
      ‘I did not see any rats in the pond.’

It also cannot be used in potentially neg raising environments.

(63) *Petras ne-tikėjo, kad mač-iau
     Peter-nom.sg neg-believe-past.3sg that see-past.1sg
     jok-ias žiurk-es prūd-e.
     any-acc.pl rat-acc.pl pond-loc.sg
     ‘Peter didn’t believe I saw any rodents in the pond.’

Therefore, Lithuanian behaves like an NP language, as Bošković predicts.

4.1.7 Possessors and adjectives

In DP languages, possessors and adjectives are fixed with respect to each other.

(64) a. John’s former house
   b. *former John’s house 33
   c. Mary’s favourite car
   d. *favourite Mary’s car 34

32. Bošković and Gajewski do not provide glosses for these sentences.
33. This is not strictly speaking ungrammatical; it is instead associated with a different interpretation: someone’s house whose owner used to be called “John”.
34. This is also grammatical under the reading [favourite Mary]’s car.
However, in NP languages, possessors and adjectives can vary in position.

(65) SC (Bošković 2010: 13)
   a. Jovanova bivša kuća/bivša Jovanova kuća
      Jovan.gen former house/former Jovan.gen house
      ‘Jovan’s former house’
   b. Jovanova skupa slika/skupa Jovanova slika
      Jovan.gen expensive picture/expensive Jovan.gen picture
      ‘John’s expensive picture’

In Lithuanian, possessors and adjectives can also vary in position.

(66) a. Jono buvęs namas
    Jon-o buv-ęs nam-as
    John-m.gen.sg former-nom.sg house-m.nom.sg
    ‘John’s former house’
   b. buvęs Jono namas
      buv-ęs Jon-o nam-as
      former-m.nom.sg John-m.gen.sg house m.nom.sg
      ‘John’s former house’

Bošković does not make any claims about the NP/DP split, but he implies that only NP languages allow free word order of adjectives and possessives. However, free word order may not be tied to the putative NP/DP split. For example, word order in in a language like Bulgarian may be governed by discourse configurational factors (Butt 2006: 5). This is a problem for Bošković. Bulgarian has D (and virtually no case); yet, unlike English, Bulgarian allows quite a bit of freedom in word order of adjectives.

4.1.8 Summary

Looking at only the above seven generalizations, it would appear that Lithuanian is an NP language, according to Bošković (Table 3). However, at least two of the generalizations are somewhat less categorical in English than he claims.

Further, it is not always clear how his generalizations relate to D. We discern two generalizations that are more clearly tied to the presence or absence of D: adjunct extraction and superiority effects. For each of these he assumes that they either require or disallow a D layer. However, we struggle to account for the rest of the generalizations, either (i) how the generalizations relate to each other, or (ii) how they relate to D. For example, why would focus adjacency require a particular structure within the nominal domain? It is at least plausible that focus phenomena would operate similarly regardless of the presence or
The illusion of the NP/DP divide

absence of D. The order of possessives and adjectives could potentially be tied to case agreement rather than to the presence or lack of D. If this is the case, then languages with both overt D and case should behave more like the putative NP languages discussed by Bošković than the languages he discusses, which lack case marking.

Most importantly for us, Lithuanian simultaneously appears to be a DP language, at least according to some of Bošković’s generalizations (§3.2). Given his analysis, Lithuanian should (almost) always fall on the NP side. Three of his generalizations are particularly damaging to his analysis.

4.2 Lithuanian as a DP language

In this section, we show that Lithuanian behaves like a DP language with respect to some other Bošković generalizations: left branch extraction, transitive nominals with two genitives, inverse scope, obligatory number morphology, and the majority reading of most.

4.2.1 LBE

English does not allow left-branch extraction (LBE) (67). Serbian/Croatian (68) and Russian (69) do, however.

(67) *Expensive/Those he saw [t_i cars].

(68) SC (Bošković 2010: 2)

Skupa/Ta_i je vidio [t_i kola]
expensive/that is seen car

(69) Russian (Bošković 2010: 2)

Doroguju/Tu_i on videl [t_i mašinu]
expensive/that he saw car
Bošković claims that only NP languages allow left branch extraction (LBE), because NP languages lack D.\(^{35}\) As with adjunct extraction, Bošković claims that DP is a phase; elements within the DP cannot be extracted. Elements within an NP can be (as there is no phase).\(^{36}\)

\[(70)\] Only languages without articles may allow LBE examples like (67)–(69).

(adapted from Bošković 2010:2)

This is a one-way implication: NP languages may or may not allow LBE, but DP languages never will.

Lithuanian does not allow LBE.

\[(71)\] a. "?"\(\text{Naujas jis perka žirkles.}\)
   new he buys scissors
   ‘He is buying new scissors.’

\(^{35}\) A potential counterexample would be Greek.

(i) Greek (Androutsopoulou 1998:2)
   \(\text{to KOKKINO idha to forema.}\)
   the red saw-1s the dress
   ‘It is the red dress that I saw.’

(ii) Greek (Ntelitheos 2004:70)
    \(\text{to kokkino idha forema.}\)
    the red saw-1s dress
    ‘It is the red dress that I saw.’

(iii) Greek (Mathieu & Sitaridou 2002:171)
   \(\text{Afto idha to forema.}\)
   this saw.PAST.1SG the dress
   ‘I saw this dress.’
   \((Kokkino 'red' is obligatorily stressed in (i) (Ntelitheos 2004).)\)

\(^{36}\) An alternative analysis comes from Abney (1987): in DP languages, adjectives take NP as their complement (i). Thus, adjectives cannot be moved as they are never a constituent. Adjectives occupy SpecNP in NP languages (ii), which makes them constituents.

Regardless of the explanation, Lithuanian does not allow this movement. Putative NP languages that do not allow this movement require an alternative explanation for why they do not. It cannot only be pinned on the absence or presence of D.
b. ???Tas jis matė mašinas.
   those he saw cars
   ‘He saw those cars.’

Lithuanian is not, therefore, a counterexample, even though it does not allow LBE. However, Bošković links this extraction to the absence of D in NP languages; in fact, his explanation for this is the same as his explanation for adjunct extraction (DP as phase). This is problematic, since Lithuanian, disallows left-branch extraction while allowing adjunct extraction. The explanation for LBE cannot rest on the same analysis as that for adjunct extraction, since only one of these phenomena is licit in Lithuanian. Thus, while LBE is not a problem for Bošković’s generalizations, it is a problem for the reasoning behind LBE and adjunct extraction being acceptable in articleless languages.

4.2.2 Adnominal genitive
Bošković claims that all DP languages allow two nominal genitive arguments; NP languages do not.

(72) Hannibal’s conquest of Rome

(73) Polish (Bošković 2010: 6)
   a. *odkrycie Ameryki Kolumba
discovery America-gen Columbus-gen
   c. odkrycie Ameryki przez Kolumba
discovery America-gen by Columbus
   ‘Columbus’s discovery of America’

(74) Languages without articles do not allow transitive nominals with two lexical genitives. (Bošković 2010: 7)

Bošković (2008a) states DP languages (such as Arabic, Catalan, and English) realize their double genitives with a help of a clitic, suffix or dummy P. He further states that double genitives are not found in articleless languages.37

37. He ignores examples with inherent case, such as (i), as well as Japanese, for reasons he does not explicate.

   (i) SC (Bošković 2008a: 4)
   lišavanje sina njegovog nasledstva
depriving son.gen his.gen inheritance.gen
   ‘depriving the son of his inheritance’
However, Lithuanian allows two genitive arguments of a noun, regardless of whether the nouns are eventive/deverbal as in (75)a, b or not, as in (75)c.\textsuperscript{38}

(75) a. Hanibalo Romos užkariavimas
    Hanibal.GEN.SG Rome.GEN.SG conquest.NOM.SG
    (i) ‘the conquest of Hanibal’s Rome’
    (ii) ‘Hannibal’s conquest of Rome’

b. Jono kaltės prisiažinimas
    John.GEN.SG guilt.GEN.SG confession.NOM.SG
    ‘John’s confession of guilt’

c. Mendelejevo elementų lentelė
    Mendeleev.GEN.SG element.GEN.PL table.NOM.SG
    ‘Mendeleev’s Table of Elements’

Lithuanian therefore behaves like a DP language, rather than an NP language with respect to this generalization. As he states that this phenomenon is \textit{not} found in articleless languages, Lithuanian is a true counterexample.

4.2.3 \textit{Obligatory \# morphology}

Bošković suggests that number morphology may not be obligatory in NP languages.\textsuperscript{39} English has obligatory number morphology, whereas Japanese does not.

(76) a. John bought a book.
    b. John bought books.

(77) Japanese (Bošković 2010: 10)

\begin{verbatim}
Susumu-ga hon-o yonda.
Susumu-NOM book-ACC bought
‘Susumu bought a/the book/books.’
\end{verbatim}

\textsuperscript{38}. We thank an anonymous reviewer for sharing interesting data that show that Russian patterns differently from Lithuanian. In Russian, the reviewer points out, eventive nominals (i) pattern differently from non-eventive nominals (ii) with respect to case.

\begin{verbatim}
(i) otkrytie Ameriki Kolumbom
discovery.NOM.SG America.GEN.SG Columbus.INS.SG
‘the discovery of America by Columbus’

(ii) Tablica èlementov Mendeleeva
    Mendeleev.GEN.SG element.GEN.PL table.NOM.SG
    ‘Mendeleev’s Table of Elements’
\end{verbatim}

Thus, even Russian violates Bošković’s generalization, at least for non-eventive nominals.

\textsuperscript{39}. This is extremely problematic, as there are DP languages that lack obligatory number (Salish languages, for example; Gillon 2013; see also Footnote 41).
However, number morphology is obligatory in Lithuanian, even on mass nouns.

(78) a. Šiurkš-ti *viln-a ping-a.
coarse-NOM.SG wool.NOM.SG get.cheap-PRES.3
‘The coarse wool is getting cheaper.’
b. Šiurkšč-ios *viln-os ping-a.
coarse-NOM.PL wool.NOM.PL get.cheap-PRES.3
‘The coarse wools are getting cheap.’

Mismatch in number morphology is ungrammatical Lithuanian.

coarse-NOM.PL wool.NOM.SG get.cheap-PRES.3
(Intended: The coarse wool is getting cheaper.)
coarse-NOM.SG wool.NOM.PL get.cheap-PRES.3
(Intended: The coarse wools are getting cheaper.)

Lithuanian is not a counterexample (since NP languages may have obligatory number morphology, or they may not), but it behaves more like a DP language with respect to this generalization.

4.2.4 Inverse scope

Inverse scope readings are allowed in DP languages (80); Bošković claims that they are disallowed in NP languages.

(80) Someone loves everyone.
    = there is someone that loves everyone
    = everyone is loved by someone

Therefore, any language that allows inverse scope should be a DP language.

Lithuanian allows both readings.

(81) a. Kažkas myli kiekvieną.
    someone loves everyone
    ‘Someone loves everyone.’
    (i) there is one person that loves every person (surface scope)
    (ii) everyone is loved by one person (each) (inverse scope)
b. Kažkoks politikas pabučiavo kiekvieną vaiką.
    some politician kissed every child
    ‘Some politician kissed every kid.’
    (i) there is one politician that kissed every kid (surface scope)
    (ii) there is one kissing politician per kid (inverse scope)

Lithuanian is therefore a true counterexample to this generalization.
4.2.5 Majority reading of most
Bošković claims that only DP languages allow the majority reading of most and NP languages do not. English allows both readings of most (82); Slovenian does not (83).

(82) a. Bill owns most Radiohead albums.
   “Bill owns more than half of the Radiohead albums.” (majority)  
   b. BILL owns the most Radiohead albums.
   “Bill owns more Radiohead albums than any relevant alternative individual does.” (relative)

(83) Slovenian (Bošković 2010: 7)
   Največ ljudi pije pivo.
   most people drink beer
   ’More people drink beer than drink any other beverage.’ (relative)
   ≠ ’More than half the people drink beer.’ (majority)

Oddly, he claims the majority reading (the reading without the) requires the presence of articles.

Bošković & Gajewski (2011) argue that most is composed of many + -EST. Due to a type mismatch, -EST needs to adjoin to something of type ⟨e, t⟩, and can do so at two different sites: NP or VP.  

(84) a. Bill owns [DP (the) [NP -ESTi [NP [AP tM ANY] [NP RH albums]]]]
   (majority)  
   b. Bill [ -ESTi [ owns [DP (the) [NP [AP tM MANY] [NP RH albums]]]]
   (relative)

Bošković & Gajewski argue that -EST can adjoin to NP only in DP languages. For them, NP is an argumental category in NP languages, and adjunction to arguments is banned (following Chomsky 1986). -EST can therefore only adjoin to the VP in NP languages. The NP adjunction site produces a majority reading; the VP adjunction site produces a relative reading.

Lithuanian has two forms that can be translated as “most”: dauguma and daugiausia (note that the root is the same; the difference lies in the suffixes). In subject position, the majority reading is available for one of these: dauguma. However, this is the head of the phrase dauguma žmonių ’majority of the people’, and therefore is not a counterexample. (Focus in these examples

40. Some speakers prefer the relative reading here. The native English speaker author of this paper cannot get the relative reading, however.

41. Note, however, that the majority reading is difficult to get with ‘the’, and the relative reading is difficult to get without ‘the’, so the schemas in (84) are not quite accurate.
The illusion of the NP/DP divide

is indicated by capital letters.) The quantifier *daugiausia* can only receive the relative reading.

(85) a. *Daugiausia žmonės* *geria* ALŲ.  
most people.NOM.PL drink beer  
‘More people drink BEER than drink any other beverage.’ (relative)  
(Unavailable reading: ‘More than half the people drink beer.’)  
(*majority)

b. *Dauguma žmonių* *geria* ALŲ.  
majority people.GEN.PL drink beer  
‘More than half the people drink beer.’ (preferred relative)  
‘More people drink beer than drink any other beverage.’ (majority)

c. *DAUGUMA žmonių* *geria* alų.  
majority people.GEN.PL drink beer  
‘More people drink beer than drink any other beverage.’ (relative)  
‘More than half the people drink beer.’ (preferred majority)

This is also true for objects in preverbal position: *daugiausia* can only receive the relative reading.

(86) *Daugiausia Radiohead albumų turi* Jonas.  
most Radiohead album.GEN.PL have.pres.3 John.NOM.SG  
‘John owns more Radiohead albums than any relevant alternative individual does.’ (relative)  
(Unavailable reading: John owns more than half of the Radiohead albums.’) (majority)

However, crucially, in postverbal position, *daugiausia* can only receive the majority reading (the reading Bošković claims is unavailable in NP languages). *Dauguma* can receive both.

(87) a. *Jonas turi daugiausia Radiohead albumų.*  
John.NOM.SG have.pres.3 most Radiohead album.GEN.PL  
‘John owns more than half of the Radiohead albums.’ (majority)  
(Unavailable reading: ‘John has more of Radiohead albums than any other relevant individual.’) (*relative)

b. *JONAS turi dauguma Radiohead albumų.*  
John.NOM.SG have.pres.3 majority Radiohead album.GEN.PL  
‘Bill owns more Radiohead albums than any relevant alternative individual does.’ (relative)  
‘John owns more than half of the Radiohead albums.’ (majority)

Lithuanian is thus a true counterexample to this generalization, but we can only tell in one environment. (It is not clear why, however, the majority reading is only available for objects in postverbal position.)
4.2.6 Summary
Five of the generalizations appear to point to Lithuanian having D. They seem to be unified by an assumption that DP languages have more structure. If Bošković is right that more structure leads to these phenomena (lack of LBE, obligatory number morphology, inverse scope, two adnominal genitives, and majority reading of most), then Lithuanian must have a covert D. In fact, with respect to these five generalizations, Lithuanian patterns almost exactly like English (Table 4).

Table 4. Lithuanian as a DP language

<table>
<thead>
<tr>
<th>Generalization</th>
<th>NP</th>
<th>DP</th>
<th>Lithuanian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBE</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>transitive nominal can have two genitives</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>obligatory # morphology</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>inverse scope</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>majority reading of most</td>
<td>no</td>
<td>yes</td>
<td>yes (in postverbal object position)</td>
<td>yes</td>
</tr>
</tbody>
</table>

As we pointed out in the discussion above, however, only three of these generalizations are truly violations of Bošković’s implications (Table 5).

Table 5. Lithuanian as a counterexample to Bošković’s generalizations

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Implicational direction</th>
<th>Lithuanian is a counterexample?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBE</td>
<td>allow LBE → NP language</td>
<td>no (but problematic)</td>
</tr>
<tr>
<td>transitive nominals</td>
<td>NP → no transitive nominals with two lexical genitives</td>
<td>yes</td>
</tr>
<tr>
<td># morphology</td>
<td>no obligatory # morphology → NP language</td>
<td>no (but problematic)</td>
</tr>
<tr>
<td>majority reading of most</td>
<td>allow majority superlative reading → DP language</td>
<td>yes (postverbal objs)</td>
</tr>
<tr>
<td>inverse scope</td>
<td>allow inverse scope → DP language</td>
<td>yes</td>
</tr>
</tbody>
</table>

Crucially, these generalizations do not apply to Lithuanian in the way Bošković predicts or expects. They cannot be used to distinguish NP languages from DP languages.

4.3 Unclear diagnostic: Stacking
Bošković claims that DP languages do not stack demonstratives and quantifiers or demonstratives and possessors, as in English (88), whereas NP languages do, as in Serbian/Croatian (89).
The illusion of the NP/DP divide

(88) a. *this my book
    b. *these some girls

(89) SC (Bošković 2010: 13)
    a. ta moja slika
       this my picture
    b. tim nekim mladim djevojkama
       those.F.PL.INST some.F.PL.INST young.F.PL.INST girls.F.PL.INST

Lithuanian can stack demonstratives and possessives as in (90)a, but not demonstratives and quantifiers as in (90)b.

(90) a. šita mano knyga
    'this my book'
    b. *šitos kažkokios mergaitės
    'these some girls'

Thus, in this case, the same test places Lithuanian halfway between an NP language and a DP one. Again, as with many of his generalizations, this one does not appear to disambiguate between NP and DP languages.

4.4 Keeping score: Bošković versus Lithuanian

When we applied Bošković’s generalizations to Lithuanian, a language that lacks overt articles, we got mixed results. According to Bošković, Lithuanian should be an NP language. Some of his generalizations do appear to align with this: adjunct extraction, superiority effects, exhaustivity, focus adjacency, negative concord, neg raising, and possessor/adjective order all point to Lithuanian as an NP language. However, even within this list, many of them are compatible with either an NP or a DP language (i.e. exhaustivity and focus adjacency). Further, some of his generalizations do not align with his prediction: left branch extraction, transitive nominals with two genitives, inverse scope, obligatory number morphology, and the majority reading of most all point to Lithuanian as a DP language. Three of these are particularly damaging to his hypothesis (transitive nominals with two genitives, the majority reading of most and inverse scope), as they violate his implications (shown in Tables 5 and 6). The fact that Lithuanian behaves like a split language (NP for some generalizations, DP for others) is a problem for Bošković, who argues for a categorical split between NP and DP languages. These mixed results indicate, at the very least, that the tests do not work for all languages. (In fact, as Lithuanian

42. This is interpreted as a kind of emphatic construction.
is typologically very similar to Slavic languages, this is particularly problematic; worse problems are likely to be found in typologically dissimilar languages.)

Moreover, our discussion reveals the main weakness of the tests examined: the lack of a core unifying property. At best, they constitute a loosely related list of properties observed in (some) NP languages and (mostly) lacking in DP languages (or vice versa). However, it remains to be explained how these properties relate (i) to each other or (ii) to the absence or presence of D. The larger immediate question is this: what are his assumptions about D itself? This is not explicitly stated in any of Bošković’s papers. In order to truly test his hypothesis on the presence or absence of D, a clear statement on the expected syntax and semantics of D is required.

In addition, there are other semantic factors involved in the interpretation of bare nouns, such as focus and word order, which may impact their syntactic structure. A discussion of how and why these phenomena interface with D is lacking, however.

What is clear from this discussion is that we all must be careful when making typological claims. Superficially similar languages can vary quite a bit when we look more carefully at the individual languages. It would be good to have diagnostics that work crosslinguistically, but often diagnostics that work in one language do not work in another.

Further, using semantic diagnostics to look for syntactic structure can be problematic. The semantics of grammatical items is not always universal, and in particular, the semantics of D varies crosslinguistically (Matthewson 1998; Gillon 2013). This means that many different kinds of semantic tests would need to be done, with each one testing for a different kind of D. For example, exhaustivity of D is not universal (Gillon 2013); therefore, a lack of exhaustivity does not automatically mean that there is no D.

In the discussion above, we have shown that there are major problems with many of Bošković’s generalizations when we look only at Lithuanian. When we include other languages, even more problems arise. In Table 6 below, we show that nine of his generalizations have counterexamples. Lithuanian is a counterexample to three of them; Salish languages are counterexamples to four of them. It is likely that other languages will turn out to be counterexamples for all of the rest of them.

Table 6. Bošković’s generalizations, their implications, and their counterexamples

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Implicational direction</th>
<th>Counterexamples</th>
</tr>
</thead>
<tbody>
<tr>
<td>adjunct extraction</td>
<td>adjunct extraction licit → NP language</td>
<td>some English speakers</td>
</tr>
<tr>
<td>superiority effects</td>
<td>NP MWF language → no superiority</td>
<td>??</td>
</tr>
<tr>
<td></td>
<td>superiority → DP MWF language</td>
<td>??</td>
</tr>
<tr>
<td>exhaustivity of possessives</td>
<td>presupposition of exhaustivity of possessives → DP language</td>
<td>??</td>
</tr>
</tbody>
</table>

(Continued)
### Table 6. (Continued)

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Implicational direction</th>
<th>Counterexamples</th>
</tr>
</thead>
<tbody>
<tr>
<td>focus adjacency</td>
<td>focus-verb adjacency → DP language</td>
<td>??</td>
</tr>
<tr>
<td>negative concord with complex constituents</td>
<td>no negative concord reading with complex neg constituents → DP language</td>
<td>??</td>
</tr>
<tr>
<td>neg raising</td>
<td>NP languages → no neg raising</td>
<td>??</td>
</tr>
<tr>
<td>possessor/adjective order</td>
<td>??</td>
<td>??</td>
</tr>
<tr>
<td>LBE</td>
<td>allow LBE → NP language</td>
<td>Greek</td>
</tr>
<tr>
<td>transitive nominals</td>
<td>NP → no transitive nominals with two lexical genitives</td>
<td>Lithuanian</td>
</tr>
<tr>
<td>majority superlative reading</td>
<td>allow majority superlative reading → DP</td>
<td>Lithuanian</td>
</tr>
<tr>
<td># morphology</td>
<td>no obligatory # morphology → NP language</td>
<td>Skwxwú7mesh (Salish)</td>
</tr>
<tr>
<td>scrambling</td>
<td>scrambling language → NP language</td>
<td>??</td>
</tr>
<tr>
<td>inverse scope</td>
<td>allow inverse scope → DP language</td>
<td>Lithuanian</td>
</tr>
<tr>
<td>radical pro drop</td>
<td>allow radical pro drop → NP language</td>
<td>Salish languages</td>
</tr>
<tr>
<td>polysynthesis</td>
<td>polysynthetic languages → NP languages</td>
<td>Salish languages</td>
</tr>
<tr>
<td>stacking</td>
<td>allow stacking of Q + dem or poss + dem → NP language</td>
<td>St’át’imcets (Salish)</td>
</tr>
</tbody>
</table>

---

43. Bošković (2010) suggests that Greek might not have true LBE, in which case, it would not be a counterexample.

44. Skwxwú7mesh does not have obligatory number marking (i); however it does have obligatory, overt determiners (ii) (Gillon 2013), contrary to Bošković’s claim.

(i) Skwxwú7mesh

a. Chen kw’ách-nexw ta púsh.
   1SG.S look-TR(LC) DET cat
   ‘I saw a cat/the cat/cats/the cats.’

b. Chen kw’ách-nexw ta pesh-púsh.
   1SG.S look-TR(LC) DET PL-cat
   ‘I saw (the) cats.’ (Gillon 2013: 16–17)

(ii) Skwxwú7mesh

a. Na wa sík kwít/a káláka.
   RL IMPF fly DET crow
   (i) ‘Crows fly.’
   (ii) ‘The crow is flying.’

b. *Na wa sík káláka.
   RL IMPF fly crow
   (Gillon 2013: 22–23)
5. Lithuanian: Testable generalizations à la Despić

In this section, we show that Despić’s (2011) tests for the presence/absence of D also provide us with mixed results: Lithuanian sometimes behaves like an NP language and sometimes like a DP language.

Despić (2011) argues that there are languages with D (those with overt articles) and languages without D (those without overt articles). He further argues that languages with Ds have different binding domains than those without Ds. At the core of Despić’s (2011) argument are four examples that, for him, illustrate the crucial expected structural difference between a DP language like English and an NP language like Serbian/Croatian.

Despić shows that, unlike in English, Serbian/Croatian possessive proper names can bind pronouns later in the clause, as in (91). Thus, the proper names and pronouns cannot co-refer; otherwise the sentences would violate Condition B. In (91)a, Kusturicin c-commands ga, and in (91)b, Markova c-commands mu.

45. Salish languages are all pro drop languages (for both object and subject) (for example, see Jelinek & Demers 1994); most Salish languages also have overt determiners (Matthewson 1998), contrary to Bošković’s claim. In (i) we provide an example from Skwxwú7mesh; similar facts obtain in other Salish languages.

(i) Skwxwú7mesh
Na ch’áw-at-ts-as.
rl help-tr-1sg.o-3erg
’S/he helped me.’

46. Salish languages are polysynthetic (Czaykowska-Higgins 1998); most Salish languages also have overt determiners (Matthewson 1998), contrary to Bošković’s claim.

47. St’át’imcets allows stacking of Q + dem (i) and dem + poss (ii), and has overt determiners (Matthewson 1998), contrary to Bošković’s claim.

(i) St’át’imcets
lán-lhkan tu7 wa7 páqw-ens takem iz’ i púkw-a.
already-1sg.s compl prog look-tr all dem det.pl book-exis
 ‘I already looked at all these books.’

(ii) St’át’imcets
melyíh-s-as=ku7
marry-caus-3erg=report
ni7=na-n-kúkw7=a
dem=det=1sg.poss-grandmother=exis
temp.deic
‘And then he married my grandmother.’
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Despić also shows that, unlike in English, Serbian/Croatian proper names can be bound by possessive pronouns, as in (92). Once again, the proper names and pronouns cannot co-refer; in this case, the sentences would violate Condition C. Njegov must c-command Kusturica in (92)a, and njegova must c-command Marku in (92)b.

As the contrast in the grammaticality indicates, English and Serbian/Croatian differ here: what is unacceptable in Serbian/Croatian, is acceptable in English. To Despić, this means “… possessors in Serbian/Croatian do c-command out of the subject noun phrases they are possessors of, and thus induce Condition C and B violations” (2011:31–32). Despić argues that this results from a lack of the D layer in Serbian/Croatian. In English, proper names cannot do this as they occupy SpecDP.

Turning now to Lithuanian, we can see that this picture does not work for all so-called NP languages. In fact, Lithuanian patterns with English in three out of four examples, and it is only in the last example that it is similar to Serbian/Croatian.

Like English, possessive proper names in Lithuanian do not c-command pronouns later in the clause. For example, in (93)a, Jono cannot c-command ji, and in (93)b, Jono cannot c-command jam; in both cases the proper name and the pronoun can co-refer.

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As the contrast in the grammaticality indicates, English and Serbian/Croatian differ here: what is unacceptable in Serbian/Croatian, is acceptable in English. To Despić, this means “… possessors in Serbian/Croatian do c-command out of the subject noun phrases they are possessors of, and thus induce Condition C and B violations” (2011:31–32). Despić argues that this results from a lack of the D layer in Serbian/Croatian. In English, proper names cannot do this as they occupy SpecDP.

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b. \textit{Jon-o paveiksl-as nukrit-o j-am}
\begin{tabular}{llll}
John-GEN.SG & picture-NOM.SG & fall-PAST.3SG & 3-DAT.SG \\
\textit{ant galv-os.} & & & \\
on & head-GEN.SG \\
\end{tabular}

(i) ‘John’s picture fell on him yesterday.’
(ii) ‘John’s picture fell on him yesterday.’

(Literally: John’s picture fell on him on the head yesterday)

Similarly, possessive pronouns do not c-command proper names in (94): \textit{jo} cannot c-command \textit{Jona}, since they can co-refer.

\begin{tabular}{llll}
\textit{J-o naujaus-ia panel-ė} & 3-GEN.SG & new-NOM.SG & girlfriend-NOM.SG \\
\textit{nuvyl-ė Jon-ą.} & & & John-ACC.SG \\
disappoint-PAST.3SG & & & \\
\end{tabular}

‘His latest girlfriend really disappointed John.’

However, for reasons we do not understand, in (95), \textit{jo} must c-command \textit{Jonui}, since they cannot co-refer.

\begin{tabular}{llll}
\textit{J-o i paveiksl-as vakar nukrit-o} & 3-GEN.SG & picture-NOM.SG & yesterday fall-PAST.3SG \\
\textit{Jon-ui ant galv-os.} & & & John-DAT.SG \\
& & & on head-GEN.SG \\
\end{tabular}

*‘His picture fell on John’s head yesterday.’
‘His picture fell on John’s head yesterday.’

Thus, contra to Despić’s expectations for a Balto-Slavic language without overt articles, Lithuanian falls somewhere in between NP/DP split rather than present a clear-cut case of an NP language. In fact, it behaves more like English than like Serbian/Croatian, which suggests a DP structure for possessives. Assuming that Lithuanian possessives uniformly have DP structure accounts for 3 out of the 4 cases; we do not have an explanation for why (95) behaves differently from English and the other 3 cases.

Moreover, there are further complications with this particular choice of examples. The examples chosen by Despić may be sensitive to the lexical semantics of the predicates involved. Specifically, if one were to replicate the Serbian/Croatian examples verbatim, with including the relationship between the filmmaker Kusturica and his films, or the creator and the creative output, the grammaticality of two Lithuanian examples become somewhat more questionable, as in (96).
The illusion of the NP/DP divide

(96) a. *Kusturica-gens naujaus-ias film-as jį
Kusturica-gen.sg new-nom.sg film-nom.sg 3-acc.sg
labai nuvyl-ė.
very disappoint-past.3sg
(i) 'Kusturica’s latest film really disappointed him'?
(ii) ?'Kusturica’s latest film really disappointed him'.

b. J-o naujaus-ias film-as
3-gen.sg new-nom.sg film-nom.sg
nuvyl-ė Kusturic-ą.
disappoint-past.3sg Kusturica-acc.sg

'*His latest film really disappointed Kusturica.'
'*His k latest film really disappointed Kusturica.'

The puzzle for Despić to solve is as follows: why the creator-creation relationship examples are significantly worse or even unacceptable to some speakers (96), while the boyfriend-girlfriend relation examples are fine (93). In terms of syntactic structure, the two respective sets of examples are the same, so violations of condition B and C should be the same, too. We have no explanation for this discrepancy; however, the point still stands: possessors do not always c-command out of their nominal structures in Lithuanian, contrary to Despić’s expectations, and as expected if possessives have DP structure.

6. Conclusions. Further questions

In this paper, we (i) showed that bare nouns in at least one articleless language vacillate between NP and DP structures (cf. Franks & Pereltsvaig 2004; Ajibóyè 2006) and (ii) argued against the NP/DP divide between languages (Bošković 2010, 2009, 2008a, 2008b, 2007; Despić 2011). We presented semantic and syntactic evidence in support of vacillation in at least one language: Lithuanian. We have shown that in unmarked environments (neutral word order, default (imperfective) aspect, neutral adjectives), the interpretations available to bare nouns are sensitive to the context. That is, bare nouns may be interpreted as either definite or indefinite. Furthermore, we identified syntactic environments that require definite nouns and exclude indefinite nouns (marked word order, marked adjectives (superlative and pronominal). Conversely, we have also identified one environment where an indefinite interpretation is required while the definite interpretation is ruled out (postverbal copula constructions). We tied these effects to the syntactic structure.
We also noted one environment that gives rise to preferred rather than obligatory definite interpretations for some speakers: perfective aspect. We acknowledge that further study of this domain is needed to understand why for some speakers the object is obligatorily definite, and for others it is only preferentially so.

We highlighted the problems with any view that differentiates between all languages that lack articles vs. all languages that have them. Looking specifically at Lithuanian, we tested the claims and generalizations about the NP/DP divide. We conclude that the generalizations do not hold because Lithuanian does not behave exactly like an NP language, as predicted by Bošković (2010, 2009, 2008a, 2008b, 2007) and Despić (2011). Rather, the results indicate vacillation between NP/DP. In other words, the failure to pattern as either of the two types is further indication that vacillation view captures the data best.

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