50 SHADES OF DEFINITENESS·

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In this paper, we explore the available interpretations of object bare nouns in Lithuanian. As in many other articleless languages, Lithuanian bare nouns can receive (in)definite interpretations. However, we show that only in unmarked environments can indefinite interpretations arise (unmarked word order, unmarked aspect, unmarked adjectival modification). As soon as any of these environments are changed, the bare noun obligatorily receives a definite interpretation. We argue that this is related to the structure of bare nouns: NPs are indefinite and DPs are definite. Certain positions/morphosyntax force a DP structure and therefore a definite interpretation.

1.   Introduction

In Lithuanian, the same bare nominal object may be interpreted as either definite or indefinite.[1] For example, in (1), *obuolį* 'apple' may receive either interpretation:

(1)   Jonas   valgė   obuolį.
        John.NOM.SG   eat.PAST   apple.ACC.SG
        (i)   'John was eating the apple.'
        (ii)   'John was eating an apple.'

However, in some contexts, bare nominal objects must be interpreted only as definite:

(2)   Jonas   su-valgė   obuolį.
        John.NOM.SG   PREF-eat.PAST   apple.ACC.SG
        (i)   'Jonas ate up the apple.'
        (ii)   *'Jonas ate up an apple.'

        In this paper, we address the following question: why can bare nominal objects sometimes receive *either* and indefinite or definite reading, and in other cases *only* receive a definite one.
        We argue that bare nominal objects in Lithuanian can be either NPs or DPs. When bare nominal objects are NPs, they are invariably interpreted as

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[1] Since the focus of the paper is bare nominal objects, we abstract away from the fact that subjects can also be (in)definite.

indefinite. When bare nominal objects are DPs, they are invariably interpreted as definite. NPs are of type <et>; DPs are of type *e*.

We look at the bare nominal objects in a range of syntactic environments: different word order, with perfective and imperfective aspect verbs, or modified by short/long adjectives. We note a correlation between the markedness of functional heads that relate to the bare nominal objects and a particular interpretation – definite or indefinite – of these objects. We assume that 'marked' refers to overt morphosyntactic coding of a particular grammatical feature, while 'unmarked' means the lack of such coding (Haspelmath 2006:26).

In what we call unmarked environments, bare nominals vacillate between NPs and DPs. In marked environments, bare nominals are invariably DPs. Thus, we posit that particular syntactic environments determine what kind of interpretations the nominals acquire. We assume that languages without overt D in theory have three kinds of syntactic environments: (i) ones that require arguments of type *e* (definite/DP), (ii) ones that require arguments of type <et> (indefinite/NP), and (iii) ones that are underspecified for a particular type of an argument ((in)definite/NP or DP)

Our paper has the following structure. In §2, we provide the data on both marked and unmarked environments for bare object nominals. In §3, we state our assumptions. In §4, we provide an analysis of the Lithuanian facts. In §5, we outline further questions.

2. The Data: Lithuanian Nominals in Marked and Unmarked Environments

In this section, we present the data. First, we examine the data in vacillation environments (2.1). Then we examine the data in fixed environments (2.2).[2] Lastly, we summarize and compare the observed generalizations (2.3).

2.1 Vacillation Environments

This section provides the data in the syntactically unmarked environments, where bare nominals in Lithuanian can receive (in)definite interpretations. We show that bare nominal objects vacillate in the following environments: when the sentence has neutral word order (2.1.1), when the verb has imperfective aspect (2.1.2), and when modified by short adjectives (2.1.3). Note that at least two out of the three discussed environments – WO and imperfective – often coincide in language use. We tease them apart for the ease of exposition.

2.1.1 Vacillation Environment # 1: Unmarked WO

In languages like Lithuanian, word order is free due to rich agreement and case morphology, which allows tracking of sentential relations. However, there is an unmarked word order, and any changes to that word order are marked in that they correlate with focus. In Lithuanian, the neutral word order is SVO

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[2] The environments presented here may not be exhaustive as this is still work in progress.

(Ambrazas 1997; cf. Song 2012, inter alia). In this word order, definite or indefinite interpretation of a bare object nominal is possible, as we see in examples below. The particular judgment is context dependent.

(3) a.   Jonas   suko   vairą.
          John.NOM.SG   turn.PAST   wheel.ACC.SG
          (i)   'John was turning the wheel.'
          (ii)   'John was turning a wheel.'

     b.   Jonas   valgė   obuolį.
          John.NOM.SG   eat.PAST   apple.ACC.SG
          (i)   'John was eating the apple.'
          (ii)   'John was eating an apple.'

2.1.2 Vacillation Environment # 2: Imperfective Aspect

Grammatical aspect is a category that encodes boundedness of events (Rothstein 2004, among others). Imperfective aspect denotes an unbounded event, whereas perfective aspect denotes a bounded event. Cross-linguistically, manifestations of aspect vary. As in other languages of the Balto-Slavic language family, Lithuanian uses verbal prefixes to express perfective aspect, while imperfective aspect is unmarked.[3] When the verb has imperfective aspect, either definite or indefinite interpretations of the bare object are possible. The particular judgment is context sensitive, as in the example below, with 'eat' in imperfective.

(4) Adomas   valgė   obuolį.
     Adam.NOM.SG   eat.PAST   apple.ACC.SG
     (i)   'Adam was eating the apple.'
             Context: Adam is the first man. It was THE apple from the tree of knowledge.
     (ii)   'Adam was eating an apple.'
             Context: Adam is an absent-minded college professor who has a habit of munching on whatever it at hand without paying attention to what that is. It was just some apple Adam picked up while walking in the orchard.

2.1.3 Vacillation Environment # 3: Short Adjectives

Lithuanian has two types of adjectives: short and long (another term used for 'long' is 'pronominal'). If a noun is modified by short adjectives, either definite

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[3] We are aware that the means of aspectual expression are more complicated than the prefixed/unprefixed opposition. The complexities of aspectual morphosyntax are irrelevant for the purposes of this paper.

or indefinite interpretation is possible, as illustrated in (5). The judgment is context dependent.[4]

(5) Jonas   valgė   didelį   obuolį.
    John.NOM.SG   eat.PAST   big.ACC.SG   apple.ACC.SG
    (i)   'John was eating the big apple.'
        Context: the only big apple available from the basket full of small apples.
    (ii)   'John was eating a big apple.'
        Context: John only eats BIG fruit, be it apples or pears. He just does not go for small. So if you see him eating a fruit, it is always big.

2.2 Fixed Environments

This section provides the data for syntactically marked environments, where bare nominal objects in Lithuanian receive only definite interpretations. The following environments are considered: marked word order (2.2.1), perfective aspect (2.2.2), modification by long/pronominal adjectives (2.2.3), or modification by superlative adjectives (2.2.4). Again, the discussed environments may overlap; we treat them separately for the ease of exposition, and to show that each of them by themselves conditions a definite interpretation of a bare nominal object.

2.2.1 Fixed Environment # 1: Marked WO

As discussed in section 2.1.1, bare objects may receive (in)definite intepretations when the sentence has SVO (unmarked) order. Other word orders are marked, and these have an effect on the available interpretations of the bare objects. If the order is OVS, the object receives a definite interpretation as in (6).

(6) Obuolį   valgė   vaikas.
    apple.ACC.SG   eat.PAST   child.NOM.SG
    (i)   'It was the apple that the child was eating.'
    (ii)   *'It was an apple that the child was eating.'
    (Lit.: 'Apple was eating the child.')

If the order is OSV, the object gets a definite interpretation as well:

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[4] Languages that have short/long adjective distinction do not pattern uniformly. Judgments in Lithuanian are unlike judgments in Serbo-Croatian (Aljović 2002).

(7)   Obuolį   vaikas   valgė.
        apple.ACC.SG   child.NOM.SG   eat.PAST
        (i)   'What the child did with the apple is to eat it.'
        (ii) *'What the child did with an apple is to eat it.'
        (Lit.: 'Apple child was eating.')

The effect of word order on the interpretation of the object can be canceled by an overt indefinite quantifier, for example 'some'. We skip the example in the interest of space.

2.2.2 Fixed Environment # 2: Perfective Aspect

Perfective aspect denotes a bounded event. In Lithuanian, perfective aspect is usually marked by a verbal prefix. In contrast to imperfective aspect (discussed in 2.1.2), bare nominal objects are interpreted as definite under perfective aspect:

(8)   a.   Jonas   **pa**-suko   vairą.
                 John.NOM.SG   PREF-turn.PAST   wheel.ACC.SG
                 (i)   'John turned the wheel.'
                 (ii) *'John turned a wheel.'

        b.   Jonas   **su**-valgė   obuolį.
                 John.NOM.SG   PREF-eat.PAST   apple.ACC.SG
                 (i)   'John ate up the apple.'
                 (ii) *'Jonas ate up an apple.'

Notice that the definite interpretation under perfective can be undermined. For example, a marginally acceptable indefinite interpretation of the object may be attained manipulating the number of the nominal, by making it plural. We skip the example in the interest of space.

2.2.3 Fixed Environment # 3: Long Adjectives

The distinguishing property of pronominal adjectives is double inflection: a regular adjectival inflection is followed by a pronominal inflection (bolded below). Both inflections encode agreement features. In contrast to short adjectives (discussed in 2.1.3), bare objects are interpreted as definite when modified by long (or pronominal) adjectives, as illustrated in (9).

(9)   a.   Jonas   suko   kreiv-ą-**jį**
                 John NOM.SG   turn.PAST   crooked-ACC.SG-**PRON.ACC.SG**
                 vairą.
                 wheel.ACC.SG
                 (i)   'John was turning the crooked wheel.'
                 (ii) *'John was turning a crooked wheel.'

    b.   Vaikas   valgė   did-į-**jį**

           child.NOM.SG   eat.PAST   big-ACC.SG-**PRON.ACC.SG**

           obuolį.

           apple.ACC.SG

           (i)   'The child was eating the big apple.'

           (ii) *'The child was eating a big apple.'

The effect of pronominal adjectives cannot be either undermined or cancelled.

2.2.4 Fixed Environment # 4: Superlative Adjectives

Lithuanian adjectives inflect for degree, encoded by suffixes (bolded below). Bare nominal objects are interpreted as definite when modified by superlative adjectives:

(10) a.   Jonas   suko   kreiv-**iaus**-ią

           John.NOM.SG   turn.PAST   crooked-**SUPER**-ACC.SG

           vairą.

           wheel.ACC.SG

           (i)   'John was turning the most crooked wheel.'

           (ii) *'John was turning a most crooked wheel.'

    b.   Jonas   valgė   didž-**iaus**-ią

           John.NOM.SG   eat.PAST   big-**SUPER**-ACC.SG

           obuolį.

           apple.ACC.SG

           (i)   'John was eating the biggest apple.'

           (ii) *'John was eating a biggest apple.'

The effect of superlative adjectives cannot be either undermined or cancelled.

2.3 Summary of Generalizations

Unmarked WO, unmarked aspect (imperfective), and unmarked adjectives ("short" adjectives) all allow (in)definite interpretations of the bare object nominal. Only when all factors are unmarked do we have vacillation; change any of these features to marked and the bare object must receive a definite interpretation. There are many contexts that force a definite interpretation: marked word orders, superlative/pronominal adjectives and perfective aspect.

3. Assumptions

This section provides an overview of our assumptions. First, we describe what characterizes definiteness (3.1). Next, we explain the semantic composition of

indefinite and definite nominals (3.2.). Then we identify the syntactic properties of the structures where indefinite and definite nominlas are nested (3.3).

3.1   What Does it Mean to be Definite?

We assume definiteness to have the following properties: anaphoricity and uniqueness. When nominals are indefinite, they denote novel referents, e.g., English *a*; whereas definite nominals denote familiar referents, e.g., English *the* (Heim 1988), as illustrated in (11).

(11)   In olden times when wishing still helped one, there lived **a king** whose
         daughters were all beautiful…   (novel)
         The next day when she had seated herself at table with **the king** and all
         the courtiers…   (familiar)
                 (*The Frog King, or Iron Henry*; Grimm's Tales, translated by D.L.
                                                                             Ashliman)

In Lithuanian, bare nouns can be used for novel or familiar referents. For example, *peruką* 'wig' in example (12a) is first introduced as a novel referent in the story, and then used again to refer to the now familiar aforementioned wig (12b).

(12)   a.   Tad   nusipirko   tikrų   žmogaus
              hence buy.for.himself.PAST   real.GEN.PL   man.GEN.SG
              plaukų   **peruką**
              hair.GEN.PL   wig.ACC.SG
               'Hence he bought himself a wig made of real human hair.'
                                                                    (novel)

        b.   … Kas   čia   juokinga,   kad   pametei   **peruką**,
              what   here   funny   that   lose.PAST   wig.ACC.SG
              paklausė   vienas   jų.
              ask.PAST   one.NOM.SG   they.GEN.PL
              '… What's so funny about losing the wig, asked one of them.'
                                                                    (familiar)
                                                        (from *Aesop's fables*)

When nominals are definite, they must refer to the maximal/unique individual in the context. Failure to comply with uniqueness requirement results in semantically infelicitous utterances as illustrated in (13) for English:

(13)   I saw five bears and seven wolves. I killed the bears. #But one ran away.

This uniqueness/maximality requirement also holds for Lithuanian definite bare nominals, as in (14):

(14) Pamačiau   penkias   meškas   ir   septynis vilkus.
see.PAST.1SG five   bear.ACC.PL and   seven   wolf.ACC.PL
Užmušiau   meškas.   #Bet viena   pabėgo.
kill.PAST.1SG bear.ACC.PL But   one.NOM.SG run.away.PAST
'I saw five bears and seven wolves. I killed the bears. #But one ran away.'

3.2 How are (In)definites Composed Semantically?

Objects may compose with their verb in a variety of ways. We argue that in Lithuanian, there are two ways for the bare object nominals to compose with their verb. Specifically, we argue that DPs compose via Function Application (which saturates the verb) and that NPs compose via Restrict (which does not saturate the verb; cf. Chung and Ladusaw 2004).

(15) a.
VP_{et}
$V_{<e,et>}$ DP_e

b.
$VP_{<e,et>}$
$V_{<e,et>}$ NP_{et}

Objects of type <et> compose via Restrict (following Chung and Ladusaw 2004). The domain of the predicate is restricted to elements that have the property introduced by the object.

(16) Restrict ($\lambda y \, \lambda x \, [\text{feed'}(y)(x)]$, dog')
$= \lambda y \, \lambda x \, [\text{feed'}(y)(x) \wedge \text{dog'}(y)]$ (Chung & Ladusaw 2004:5)

The internal argument of the predicate must still be saturated via some other process (existential closure).

3.3 How are (In)definites Composed Syntactically?

We assume the Universal Base Hypothesis (Hegarty 2005; Rizzi 1997; Kayne 1995 among others). We view Universal Base as a syntactic spine in which syntactic heads follow a particular universally available hierarchy.

Nominal bare objects are the focus of our study. We assume that within the syntactic spine objects combine with verbs in one way: it is a head-complement relation. This relationship is structurally fixed.

(17)
VP
V   Complement

However, we argue that in Lithuanian, factors other than verb-complement relation affect (in)definite interpretation of the bare object nominals.

We assume that features (or feature bundles) nest within the nodes of syntactic spine. These features drive syntactic operations (Chomsky 1995,

Pesetsky & Torrego 2006, Adger & Svenonius 2011, among others). Two kinds of features are needed to set syntax in motion: uninterpretable and interpretable. A feature is interpretable if it is valued. An uninterpretable feature needs to be valued for a syntactic operation to proceed.

Abstracting away from any particular theory of syntax-information structure interface (for a recent overview, see Kučerová & Neeleman 2012), we assume that a preverbal position of objects correlates with focus in Lithuanian (cf. a long tradition of such analysis of Hungarian focus, from Szabolcsi 1981 to Szendrői 2003).

4.   The Analysis

In the unmarked environments, bare noun objects may vacillate between NP and DP structure. In other words, these environments allows for the interpretation of bare nouns to be solely determined by the context. If, on the other hand, anything relating to the bare nominal is marked (word order, aspectual prefixes, adjectival suffixes), then the bare nominal object must be DP, and the interpretation is fixed as definite. Thus far, we have established four cases of marked environment: (i) focus, (ii) perfective aspect, (iii) superlative degree, (iv) and pronominal adjectives (a.k.a. long adjectives/definite adjectives). There is no strict syntactic correlation between the environments examined: perfective aspect may or may not co-occur with a particular word order or particular modifier of the bare nominal object. However, in each case, the marked element enriches the syntactic structure and provides contextual background for the bare nominal object. Thus, in each case the reason for the obligatory insertion of D varies. Definiteness is therefore an epiphenomenon of the syntax-semantics interface. In what follows, we sketch out how the interpretation arises in each case. Note that our analysis is based on the data from one language. It may very well be that cross-linguistically, there is more variation than Lithuanian exhibits.
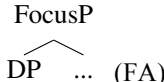
Word order. When the sentence has unmarked SVO order, the bare noun object occupies VP. The object may vacillate between either NP or DP (or <et>/e) structure, subject to particular context.[5] Thus, while within VP, the object composes either via Restrict or Function Application.

(18)   a.   VP   b.   VP

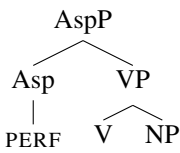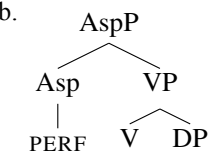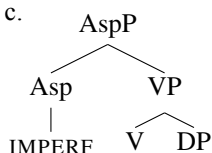   V   NP   (Restrict)   V   DP   (FA)

If the bare nominal object does not occupy VP, it cannot be of type <et>. D must be inserted. We assume that the preverbal position correlates with focus in Lithuanian. If FocusP is not projected, V can select either for NP or DP,

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[5] We set aside the issue what contextual restrictions there may be and how to account for them.

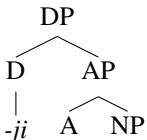depending on discourse context. If object occupies FocusP, N content must be DP.

(19)   a.   FocusP   b.   *   FocusP

       DP ... (FA)   NP ...

Aspect. If the verb is imperfective, the bare nominal object may vacillate between either NP or DP. If the verb is perfective, the bare nominal object must be DP because the verb enforces a quantized/atomic interpretation on the nominal (following Filip 1999 for Slavic perfectives). Atomic nominals must be of type e and elements of type e compose via FA only.
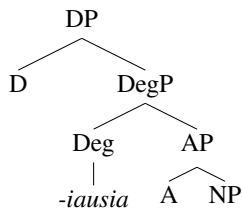
(20)   a. *   AspP   b.   AspP   c.   AspP

     Asp   VP   Asp   VP   Asp   VP
     | | |
  PERF   V   NP   PERF   V   DP   IMPERF   V   DP

Thus, if AspectP content is imperfective, then V selects for N. If AspectP content is perfective, then V selects for DP. (It may be that cross-linguistically, AspectP content and its relation to bare nominals varies.)

Pronominal adjectives. If a bare nominal object is modified by a pronominal adjective marked by *–ji* , D is required. D hosts the *–ji* suffix. Adjective moves to D (see Aljović 2002 for a similar view):

(21)   DP

    D   AP
    |
   -ji   A   NP

Superlative adjectives. If a bare object is modified by a superlative adjective, D is required, too. In this case, the adjective first moves to Degree, and then to D. D is triggered by presence of Degree.

(22)   DP

   D   DegP

      Deg   AP
      |
    -iausia   A   NP

The four cases are distinct, yet they are united in that a functional head determines the interpretation of a bare nominal object. In the first case, the focus requirement conditions definiteness (D is inserted to save structure). In the second case, the perfective requirement conditions definiteness (nominal must be quantized/type *e*). In the third case, the superlative requirements conditions definiteness (superlative introduces uniqueness/D). And finally, in the fourth case, the suffix in D conditions definiteness (pronominal suffix occupies D).

5.   Problem Case

Our analysis suggests there are multiple paths to projecting D: the presence of Focus, perfective aspect, pronominal adjectives or superlative adjectives. In each case, a different functional projection is implicated.

We have discussed cases that are straightforwardly vacillation (unmarked cases) and cases that are obligatorily definite (marked cases). However, there is at least one case that is in between: pluractional verbs.

With pluractional verbs, either definite or indefinite interpretation is possible, but the definite interpretation is strongly preferred.

(23)   Jonas   sukinėjo   vairą.
        John.NOM.SG   turn.PLUR.PAST   wheel.ACC.SG
        (i)   'John kept turning the wheel.'
        (ii) ?? 'John kept turning a wheel.'

However, objects under pluractional verbs are hard to judge uniformly: other factors intervene (e.g., lexical class of the verb, perfective aspect, case of the object).

To illustrate, consider the case of a consumption verb like **gerti** 'to drink'. In (24abc), 'drink' is manifested as an unergative verb with an optional object. Note (24c) reading (ii), where the definite interpretation is marginal due to the Gen case. In (24d), we see that 'drink' in its unprefixed form cannot be selected by a pluractional suffix. In (24ef), we see that pluractionalized verb cannot be improved by adding an object, either in Acc or Gen case.

(24)   a.   Jonas   gėrė.
                John.NOM.SG   drank.PAST
                'John was drinking.'

        b.   Jonas   gėrė   vyną.
                John.NOM.SG   drank.PAST   wine.ACC.SG
                (i)   'John was drinking the wine.'
                (ii)   'John was drinking wine.'

    c.   Jonas   gėrė   vyno.
           John.NOM.SG   drank.PAST   wine.GEN.SG
          (i)   'John was drinking of some wine.'
          (ii)   ?'John was drinking the wine.'

    d. * Jonas   ger**inė**jo.
           John.NOM.SG   drank.PLUR.PAST

    e.   *Jonas   ger**inė**jo   vyną.
           John.NOM.SG   drank.PLUR.PAST   wine.ACC.SG

    f.   * Jonas   ger**inė**jo   vyno.
           John.NOM.SG   drank.PLUR.PAST   wine.GEN.SG

However, if a perfective suffix is added, the data tell a different story. In (25abc), 'drink' is still manifested as an unergative verb with an optional object, albeit in perfective aspect. Note that (25b) does not allow a definite interpretation. In (25d), we see that 'drink' in its prefixed form *can* be selected by a pluractional suffix. In (25ef), we see that pluractionalilzed verb *can* take an object, in Genitive case, but not in Accusative. The object in Genitive case is preferably interpreted as indefinite, but definite interpretation is possible.

(25) a.   Jonas   **iš**gėrė.
            John.NOM.SG   PREF.drank.PAST
            'John drank something.'

      b.   Jonas   **iš**gėrė   vyna.
            John.NOM.SG   PREF.drank.PAST   wine.ACC.SG
           (i)   'John drank up the wine.'
           (ii) *'John drank up wine.'

      c.   Jonas   **iš**gėrė   vyno.
            John.NOM.SG   PREF.drank.PAST   wine.GEN.SG
           (i)   'John drank up of the wine.'
           (ii)   'John drank up some wine.'

      d.   Jonas   **iš**ger**inė**jo.
            John.NOM.SG   PREF.drank.PLUR.PAST
           'John drank up (something) now and then.'

      e.   Jonas   **iš**ger**inė**jo   vyno.
            John.NOM.SG   PREF.drank.PAST   wine.GEN.SG
           (i)   'John drank up of wine now and then.'
           (ii) ?'John drank up of the wine now and then.'

f.	* Jonas	**iš**ger**inė**jo	vyna.
	John.NOM.SG	PREF.drank.PAST	wine.ACC.SG

6   Conclusion

We argue that, in Lithuanian, NPs are invariably interpreted as indefinite, DPs are invariably interpreted as definite, and that NPs are of type <et> and DPs are of type *e*. In unmarked environments, bare nominals vacillate between NPs and DPs, and therefore between indefinite and definite interpretations. In marked environments, bare nominals are invariably DPs, and therefore invariably definite. What constitutes marked/unmarked environments and how these are played out in a particular language may be subject to cross-linguistic variation.

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