Kind reference within DPs: evidence from Lithuanian

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Introduction: This study investigates Lithuanian nominal expressions denoting a kind reference, which are bare nominals and nominals modified by adjectives with the definite morpheme *-ji(s)*. I address two points: what governs the nominal's ability to denote kinds and how is kind reference formed within a DP in terms of semantics and morphosyntax. I use a well-known theoretical model, the so-called *Neocarlsonian theory* (Carlson 1977, 1989; Chierchia 1998; Dayal 2004), to investigate these points and discuss what implementations the Lithuanian data have for this theory.

Number Marking and Kinds: As far as the first point is concerned, Chierchia (1998) and Dayal (2004) show that number marking and presence of (in)definite articles within a language constrain nominal's ability to express kinds. Lithuanian kind-referring expressions are indeed sensitive to number marking since bare mass nouns (1a) and bare plurals (1b) have a kind reading, while bare singulars (1c) don't. Nevertheless, the theory predicts that languages without articles should allow both bare plurals and bare singulars as kinds. Plural kinds are derived via the down operator "$\cap$", while singular kinds are formed via the iota operator "ι". This prediction is not borne out for Lithuanian, an article-less language. Even though bare singulars can be combined with the iota operator, they still cannot express kinds challenging the theory.

(1)   a. Bronza buvo išrasta   labai anksti.
          Bronze was   invented very early.

      'Bronze was invented very early.'

      b. Afrikoje   raganosiai   yra   jau   išnykę.
         Africa.LOC rhinoceroses.**PL**.M be.PRS.3 already extinct-ACT.PRT.PL.M

         'In Africa, rhinoceroses are already extinct.'

      c. #Afrikoje, raganosis   yra   jau   išnykęs.
         Africa.LOC rhinoceros.**SG**.M be.PRS.3 already extinct-ACT.PRT.SG.M

         In Africa, the rhinoceros is already extinct.' (non-taxonomic reading)

Number Marking and Sub-kinds. For sub-kinds, Lithuanian uses adjectives with the definite form suffix *-jis*, which attaches only to non-NP categories. I will call these adjectives long adjectives. The incompatibility of singular morphology and kind formation is resolved once the long adjective is added to a nominal. Both plural (2a) and singular nominals (2b) are allowed. Adjectives without this suffix fail to denote kinds as in (3). The Neocarlsonian model again predicts that plural nominals with long adjectives are formed using the down operator and the singular instances are derived with the iota operator. I investigate the behavior of nominals with long adjectives and show that both singular and plural nominals include the down operator, which is lexicalized as the suffix *-jis*. This finding is important because it requires the readjustment of the denotation of the down operator which in Chierchia's (1998) analysis is defined only for plural instances.
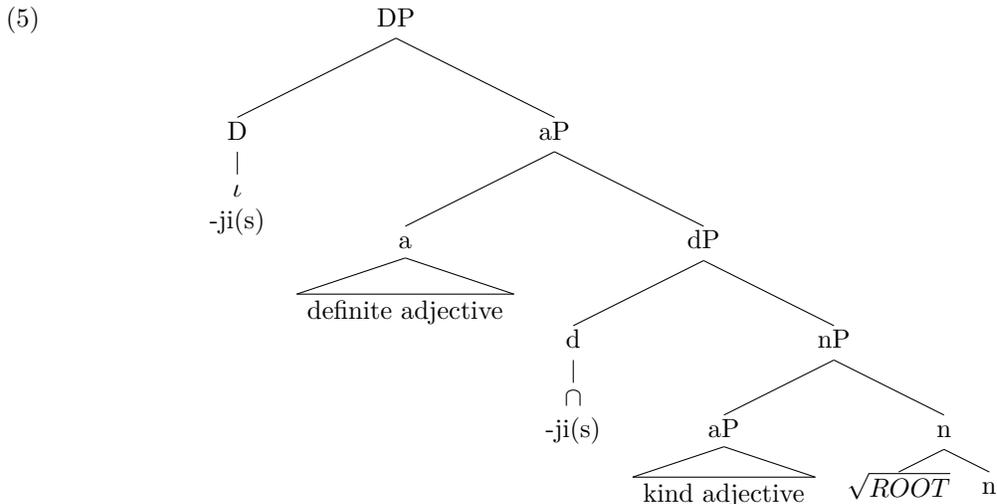
(2)   a. Afrikoje   juodie-ji   raganosiai   yra   jau   išnykę.
         Africa.LOC black-**DEF** rhinoceroses.**PL**.M be.PRS.3 already extinct-ACT.PRT.PL.M

         'In Africa, black rhinoceroses are already extinct.'

      b. Afrikoje   juodas-is   raganosis   yra   jau   išnykęs.
         Africa.LOC black-**DEF** rhinoceros.**SG**.M be.PRS.3 already extinct-ACT.PRT.SG.M

         'In Africa, the black rhinoceros is already extinct.'

(3) a. #Afrikoje juodi raganosiai yra jau išnykę.
Africa.LOC black rhinoceroses.**PL**.M be.PRS.3 already extinct-ACT.PRT.PL.M

'In Africa, black rhinoceroses are already extinct.'

b. #Afrikoje juodas raganosis yra jau išnykęs.
Africa.LOC black rhinoceros.**SG** be.PRS.3 already extinct-ACT.PRT.SG.M

'In Africa, the black rhinoceros is already extinct.'

The position of kinds within a DP. As far as the second point of this paper is concerned, I explore morphosyntactic properties of kinds with a particular focus on long adjectives. Long adjectives have not only a kind meaning, but also a definite meaning as in (4). I call adjectives with a kind meaning kind-level adjectives and those that express definiteness definite adjectives. Kind-level adjectives and nominals are two pieces on surface. However, unlike definite adjectives, they form a single inseparable complex within a NP, which is a A-N construct (Borer 1998, 2009) that resembles compounds, but has some phrasal properties otherwise not found in compounds. This finding gives additional support for a claim that kinds originate low within a DP (Cetnarovska 2014; Rutkowski & Progovac 2005, 2006; Zamparelli 2000).

(4) baltas-is lokys
white-DEF bear

(i) 'the white bear' - ✓definite reading, (ii) 'the polar bear' - ✓kind reading

By comparing definite and kind-level adjectives, I give evidence for the presence of two functional heads within a DP as in (5): a D head responsible for definiteness where the iota operator originates, and a little d head, base-generated immediately above NP, where the down operator responsible for kinds is located. Both operators are applied covertly to nominals without adjectives or expressed as -*jis* when adjectives are present. Thus, this paper offers a modified version of Neocarlsonian model where the down operator has a fixed position within a DP and is applied to both singular and plural expressions to derived kinds. This analysis makes correct predictions for nominals with long adjectives and gives a new theoretical perspective on kind reference.

(5)

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                        DP
              ┌─────────┴─────────┐
              D                   aP
              │           ┌───────┴───────┐
              ι           a               dP
           -ji(s)    ┌────┴────┐     ┌─────┴─────┐
                 definite adjective  d           nP
                                     │        ┌───┴───┐
                                     ∩        aP      n
                                  -ji(s)  ┌───┴───┐  ┌─┴─┐
                                      kind adjective √ROOT n
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