### Syntax and Semantics of Bare NPs: Objects of *na-sja* verbs in Russian

**1.** Much debate in the previous literature is dedicated to "deficient" nominals: on the syntactic side, it has been shown that some nominals are less than fully projected DPs (cf. Pereltsvaig 2006, 2007); such nominals are shown to have restricted distributional properties. Semantic literature examines interpretation of "deficient" nominals which is not achieved through the usual function-application (cf. Dayal 2003, Farkas & de Swart 2003, Chung & Ladusaw 2004, a.o.). In this paper, we examine how syntactic and semantic properties of such "deficient" nominals ***interact*** in one construction, namely in Genitive objects of verbs with cumulative *na-* and *-sja* (GEN-phrases) in Russian. We contrast these GEN-phrases with Instrumental counterparts (cf. (1a), (1b)), which have neither the syntactic nor the semantic peculiarities of the GEN-phrases.

**2.** First, we examine the **syntactic properties** of GEN-phrases and show that they are much more restricted than the INSTR-phrases: GEN-phrases do not allow D-level elements, such as reference-denoting demonstratives and pronouns; nor can they contain certain adjectives (cf.(2)), which we take to be merged in the D-layer as well (cf. Pesetsky 2007). Moreover, the GEN phrase does not allow any expressions of quantity, such as numerals, weak quantifiers, quantity nouns or container nouns, cf. (3a-b). We conclude that the GEN phrase lacks the projections of DP and NumP and is maximally a bare NP. In line with the diagnostics in Pereltsvaig (2006), being a bare NP, the GEN phrase cannot serve as a controller or as an antecedent of anaphora.

**3.** Next, we show that **semantic properties** of GEN-phrases are tightly connected to their special syntactic properties. Similarly to other types of "deficient" nominals cross-linguistically, the GEN phrase exhibits reduced morpho-syntax, cannot receive a referential interpretation and is scopally restricted (cf. (4)). The incompatibility of the GEN phrase with D and Num level elements further points to it non-referential and non-quantificational nature. Therefore, we propose that (i) the GEN phrase denotes a property (its semantic type is <e,t>; cf. Partee and Borshev 2004, Kagan 2005 on other types of GEN complements in Russian), and (ii) it combines with the verb by means of semantic incorporation, along the lines of Farkas and de Swart (2003) (or pseudo-incorporation in the sense of Dayal 2007). We adopt a formal approach to semantic incorporation based on Dayal's (2003) analysis of semantic incorporation in Hindi (5).

**4.** Finally, we examine the semantics of the construction as a whole and show how the special semantic properties of GEN-phrases tie in with the semantics of the cumulative *na-* and *-sja*. A predicate that contains a *na-sja* verb is an accomplishment event predicate, denoting an event that is measured out by the state of the subject, a state of experiencing a certain degree of satiation with the process denoted by the VP. The prefix *na-* specifies that the degree of satiation *d* meets or exceeds a contextually determined expectation value. The semantics of (6) is formalized in (7). (In the paper, we show in detail how this semantics is compositionally derived.) As for sentences which contain the GEN phrase (1b), we analyze GEN phrase as part of the VP constituent. The VP denotes a process of burger-eating, and it is with this process that the subject is entailed to experience satiation (8). Given that having had enough of burger-eating does not entail having had enough of eating in general, we predict correctly that (1b) does not entail (6). Finally, we will argue that the INSTR phrase functions as an adjunct and is adjoined at a relatively high position. It does not affect the semantics of the VP; therefore, the process with which the subject experiences satiation according to (1a) is the process of eating (9), with the result that (1a) entails (6).

**5.** The study of *na-sja* verbs allows us to draw insightful conclusions about the interaction of syntactic and semantic properties of bare NPs. Further, we demonstrate how the syntactic function

and the structural position of the nominal affects the compositional semantics of the investigated sentences.

(1)     a. Lena       najelas'       kotletami.       b. Lena   najelas'       kotlet.
           Lena       *na*-ate-*sja*       burgers.**INSTR**       Lena   *na*-ate-*sja*       burgers.**GEN**
           'Lena stuffed herself with burgers.'                'Lena ate her fill of burgers.'

(2)   * Ja       naelas'   {ostal'nyx  /vsex /sledujuščix   /pervyx       /dannyx}       kotlet.
         I       *na*-ate-*sja* {remaining /all   /following       /first       /given}       burgers

(3)     a.       Ja       najelas'       pjatju       kotletami       / *pjati       kotlet.
                 I       *na*-ate-*sja*       five.INSTR       burgers.INSTR / *five.GEN   burgers.GEN
        b.       Ja       napilas'       stakanom       vody       / *stakana       vody.
                 I       *na*-ate-*sja*       glass.INSTR   water.GEN       / *glass.GEN   water.GEN

(4)     Lena   nasmotrelas'       francuzskix   fil'mov.
        Lena   *na*-watched-*sja*       [French       films].GEN
        'Lena has watched French films to the limit.' (French films in general, not specific films)

(5)     a.   Transitive verb:       $\lambda x \lambda e.V(e) \wedge$ theme (e,x)
        b.   Incorporating verb:       $\lambda P_{<e,t>} \lambda e.$ P-V (e)

(6)     Lena   najelas'.
        Lena   *na*-ate-*sja*
        'Lena ate her fill/Lena had a bellyful / Lena is stuffed full.'

(7)     $\exists d \exists e \exists s$ [ate(e) $\wedge$ agent (e,l) $\wedge$ cause (e,s) $\wedge$ experiencer (s,l) $\wedge$ satiation (s, d, $\lambda e.$ate(e) $\wedge$ agent (e,l)) $\wedge$ d $\geq$ d$_c$ ]

(8)     $\exists d \exists e \exists s$ [burger-ate(e) $\wedge$ agent (e,l)$\wedge$ cause (e,s) $\wedge$ experiencer (s,l) $\wedge$ satiation (s, d, $\lambda e.$burger-ate(e) $\wedge$ agent (e,l)) $\wedge$ d $\geq$ d$_c$ ]

(9)     $\exists d \exists e \exists s \exists y$ [ate(e) $\wedge$ agent (e,l)$\wedge$ cause (e,s) $\wedge$ experiencer (s,l) $\wedge$ satiation (s, d, $\lambda e.$ate(e) $\wedge$ agent (e,l)) $\wedge$ d $\geq$ d$_c$ $\wedge$ instrument (e,y) $\wedge$ burgers (y)]

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