Abstract. This paper investigates Small Nominals, that is nominals that lack the DP projection. It is shown that Small Nominals can appear in argument positions, but even in argument positions they are non-referential. Thus, it is proposed that thematic relations underpinning argumenthood, on the one hand, and referentiality, on the other hand, do not rely on the same mechanism (e.g., referential indices). The analysis developed in this paper makes use of $\phi$-features instead of referential indices; specifically, referentiality is said to be encoded by means of $\phi$-feature values, which are unavailable until D° is merged. Finally, it is argued that the differences between languages without overt articles (e.g., Russian) and those with overt articles (e.g., Norwegian) are purely morphological rather than syntactic; both types of languages are shown to have both DPs and Small Nominals.

1. Introduction

This paper is concerned with the nature and distribution of what I shall call Small Nominals, namely those nominals that are not projected fully as DPs, but rather lack some or all functional projections. In this way, Small Nominals are parallel to Small Clauses, which too lack some or all functional projections. There is a considerable debate in the literature as to how ’small’ Small Clauses really are and how much functional structure they are missing; crucially for our purposes, Small Clauses and Small Nominals can be seen as parallel in that they lack the TP and DP projections, respectively. The parallelism between these two projections has been noticed at least since Abney’s (1986) DP hypothesis, and N-to-D movement has been seen as the nominal counterpart of V-to-I movement in the clausal domain (see e.g., Ritter 1988, 1991). Thus, one aspect of the parallelism between Small Clauses and Small Nominals is that they lack similar projections.

But the parallelism does not end there. As I argue in this paper, Small Nominals are like Small Clauses in that they can appear in (syntactic) argument positions. Moreover, the parallelism is also semantic: as is well-known, Small Clauses lack temporal reference; similarly, as I show in this paper, Small Nominals lack individual reference. In what follows, I identify a number of distributional and interpretational differences between Small Nominals and DPs and develop an analysis of these differences that relates them to the lack of individual reference in Small Nominals. Furthermore, I argue that despite some distributional differences, there is no evidence to support the Positional Alternative, whereby DPs and what I claim to be Small Nominals differ not in their internal structure but in their position in the clause.

By arguing for the Small Nominal hypothesis, I reject the standard view that all (argument) nominals within the same language are of the same size. Leaving aside those who reject the DP Hypothesis altogether (e.g., Börjars 1998), there are two approaches within this standard view. One of them can be called the Universal DP approach, adopted by Longobardi (1994), Matthewson (1998), Progovac (1998), Kallulli (1999), inter alia, who argue that all argument nominals are projected fully as DP in such different languages as Italian, Lilloet Salish, Serbo-Croatian, Norwegian, and Albanian, and even universally. The other approach – adopted by Chierchia (1998), Baker (2003a), Bošković (to appear), inter alia – can be dubbed the Parametrized DP approach: some semantic or
Small Nominals

syntactic parameter is responsible for distinguishing two types of languages, those with argument DPs (e.g., English, Italian, etc.) and those with argument NPs (e.g., Russian, Polish, Serbo-Croatian, or Chinese). In this paper, I argue that the distinction between DPs and Small Nominals can be made language-Internally. In other words, even within the same language one finds both DPs and Small Nominals in canonical argument positions, such as subjects and objects (and complements of prepositions).

The greater part of the data in this paper concern Small Nominals in Russian, but I show also that Small Nominals are found in argument positions in other languages as well, including languages that have overt articles, such as Norwegian, German, French, Italian, Spanish, and English. Thus, I maintain that postulating null determiners in some constructions in article-less languages is – contra Baker (2003a, p. 113) – neither “undermotivated” nor “artificial”, and together with not projecting the DP in some constructions in languages which have overt articles, it allows for a unified analysis of various constructions cross-linguistically.

From the semantic point of view, my proposal differs from that of Chierchia (1998), who maintains that (in some languages) bare NPs in syntactic argument positions are interpreted as type e. According to my proposal, only DPs can be of type e. In contrast, Small Nominals denote either properties, as in the case of bare NPs (e.g., boy), or “sums … with n atoms”, as in the case of QPs (e.g., three boys); see Landman (2004). Note further that my proposal differs also from Kallulli’s (1999) approach to bare singulars in Norwegian (discussed in section 3 below). Although I agree with Kallulli that bare NPs translate into the predicate type <e,t>, I argue in this paper that such bare NP arguments (as well as QP arguments) occupy the same syntactic positions as their DP counterparts. Although a detailed semantic analysis of Small Nominal arguments goes beyond the scope of this paper, I suggest that heads should be able to take arguments of various semantic types: in addition to generalized quantifiers of type <e,t> and referential DPs of type e, they should be able to take arguments of type <e,t> as well (although, as will be shown below, some heads, such as the Russian cumulative prefix na- or the French preposition en, select only arguments that are Small Nominals and translate into the predicate type <e,t>). Thus, my proposal dovetails with those of van Geenhoven (1998) and Chung and Ladusaw (2003), but is based on a different set of empirical facts.

The rest of the paper is organized as follows. In section 2, I discuss Small Nominals in Russian; subsections 2.1 and 2.2 deal with Small Nominal subjects and objects, respectively. Section 3 provides examples of Small Nominals in other languages. Section 4 is dedicated to the analysis of the data presented in sections 2 and 3. Section 5 concludes the paper.

---

2 For the purposes of this paper, I put aside generalized quantifiers (e.g., all (the) boys), focusing on referential DPs such as the boy. I assume that generalized quantifiers are of a higher semantic type than referential DPs (<<e,t,t> vs. e) and involve more syntactic structure, with the generalized quantifier merged in a projection higher than DP.

(i)  
```
 FP
   all
    DP
     D the QP
       Q NP
         five boys
```

Since generalized quantifiers ‘contain’ a DP, they pattern with DPs with respect to the tests used in this paper. Note also that in Russian quantifiers merged above DP (e.g., každyj ‘every, each’, vs. ‘all’) differ from quantity expressions merged in QP below DP in that the latter but not the former assign genitive case to their complement.

3 A more detailed semantic analysis of the group interpretation of QPs goes beyond the scope of this paper.
2. Small Nominals in Russian

Depending on the functional structure one assumes for nominals, one can identify a number of different types of Small Nominals. In this paper, I assume a rather minimal structure for referential nominals:

(1) Referential nominals: \[ DP \]

\[ D \quad QP \]

the \[ Q \quad NP \]

five \[ boys \]

Assuming this structure, one can identify two types of Small Nominals: bare NPs and QPs (Quantity Phrases). The latter is merged to host quantity expressions, such as certain types of quantifiers (e.g., Russian *mnogo* ‘many, much’, *bolʼšinstvo* ‘most, majority’, *neskolʼko* ‘several’), as well as cardinal numerals and quantity nouns (e.g., Russian *kuča* ‘heap, pile’, *more* ‘sea’, etc. in their quantitative meaning).

(2) Small Nominals:

a. \[ QP \]

\[ Q \quad NP \]

five \[ boys \]

b. \[ NP \]

\[ NP \]

\[ boys \]

In this section, I discuss Small Nominals in Russian, focusing on QPs; bare NPs in Russian are discussed briefly in section 3. First, I show that such Small Nominals can appear both in subject and object positions (section 2.1 and 2.2, respectively). Second, I argue that the Small Nominal analysis is preferable to the Positional Alternative, which analyzes the contrasts in terms of the position of the nominal in the clause rather than its internal structure. Third, I show that even when such Small Nominals appear in argument positions, they do not pattern with DP arguments with respect to a number of phenomena involving referentiality (i.e., reference to individuals). As will be shown in section 3 below, the same phenomena apply to Small Nominals in other languages as well.

2.1. Small Nominals in Subject Position

In this section, I discuss subject nominals containing a quantity expression (such as a numeral) and motivate a distinction between two kinds of such subjects, which despite being identical on the

---

4 For the sake of exposition, here and below I omit specifiers, as well as the CIP, the projection which I assume to host plural morphology (following Borer 2004).

5 In the Germanic, Romance, and Semitic literature the QP projection is sometimes labeled as NumP or #P, see Ritter (1991), Borer (2003); Landman (2004) uses Measure Phrase for a comparable projection. I am using the label commonly found in Slavic literature since the bulk of the data in this paper come from Russian. An additional issue is whether quantity expressions are merged in the head or the specifier of QP; I return to this question in section 2.1.2 (see also Franks and Pereltsvaig 2004 and Bailyn 2004 for discussion). Finally, in this paper I restrict myself to examples with the so-called ‘higher numerals’ (5 and above) in Russian since ‘lower numerals’ (1 and 2-4) present a host of additional independent morphosyntactic complications, which go beyond the scope of this paper. For a discussion of ‘lower numerals’, the reader is referred to Babby (1987) and Rappaport (2003, pp. 164-168; 2004, pp. 338-340).

6 In this paper, I focus on the distinction between DPs and Small Nominals (unifying to some extent QPs and bare NPs). However, I do not wish to be understood as collapsing QPs and bare NPs under the same category either. The distinction between QPs and bare NPs becomes apparent from a consideration of predicative constructions in Russian; the reader is referred to Pereltsvaig (2001), Franks and Pereltsvaig (2004), and Madariaga (forthcoming) for discussion.
surface exhibit distinct semantic and syntactic properties. One kind of subject receives a referential interpretation, triggers agreement on the predicate, and can serve as an antecedent of an anaphor or as a controller of PRO, whereas the other kind exhibits the opposite pattern: it receives a non-referential interpretation and cannot trigger agreement on the predicate or serve as an antecedent or as a controller. Developing ideas in Franks (1994) and Franks and Pereltsvaig (2004), I argue that the two kinds of subjects are distinguished by their internal structure; specifically, the former are DPs, whereas the latter are Small Nominals (QPs). In what follows, I describe and catalog the properties that distinguish DP subjects from QP subjects, beginning with agreement, which in the absence of overt articles will serve as an indicator of the kind of subject occurring in each case. After establishing the distinction between the two kinds of subjects, I consider an alternative analysis which associates the two types of subjects with distinct positions in the clause rather than with different internal structure and argue against such an analysis.

2.1.1. Two kinds of quantity subjects in Russian

Let us begin with the well-known contrast in (3) below: the bracketed subject *pjat’ izvestnyx aktérov* ‘five famous actors’ may or may not trigger plural agreement on the verb; if the subject does not trigger agreement, the predicate appears in the 3rd person neuter default form.7

(3) a. *V ètom fil’me igrali* [pjat’ izvestnyx aktërov].

in this film played.PL five famous actors

Five famous actors played in this film.

b. *V ètom fil’me igralo* [pjat’ izvestnyx aktërov].

in this film played.NEUT five famous actors

Five famous actors played in this film.

One important thing to note here is that the two possibilities in (3) – plural vs. default neuter agreement – are not always equally acceptable for Russian speakers.8, 9 For example, such factors as the choice of the quantity expression, animacy of the subject, and the form of the predicate affect the preferences for one or the other of the agreement patterns (see Graudina et al. 1976, pp. 27-29). For instance, with respect to the choice of a quantity expression, Graudina et al. provide the following figures: nominals with numerals appear with neuter agreement in 46% of tokens, nominals with *bol’šinstvo* ‘most’ appear with neuter agreement in 67% of tokens; this bias is the most pronounced with nominals with *neskol’ko* ‘several’, which appear with neuter agreement in 75% of tokens. Furthermore, animate subjects (Graudina et al. call them ‘active subjects’) are more likely to appear with plural agreement on the predicate; witness the contrast below:

(4) a. *Prošli neskol’ko čelovek.*

passed.PL several people

Several people have passed.

---

7 The following abbreviations are used in the glosses: 3 = 3rd person, ACC = accusative, APPROX = approximative preposition, CUM = cumulative, DAT = dative, DEF = definiteness suffix in Norwegian, DEL = delimitative, DISTR = distributive, FEM = feminine, GEN = genitive, GEN2 = second genitive (the a-genitive), IMPF = imperfective, IMPF2 = secondary imperfective, INSTR = instrumental, LONG = long form of adjective, MASC = masculine, NEUT = neuter, NL = nominalizing morpheme, NOM = nominative, PERF = perfective, PL = plural, POSS = possessive, QU = question particle, RE = reiterative, REFL = reflexive, SHORT = short form of adjective, SG = singular. Only the relevant information is indicated in each example.

8 Here and below, I have been careful to report any variation among speakers I have encountered. Where no such variation is reported, it is to be understood that no variation was attested.

9 It is interesting to note here that although some of the speakers I have consulted judged (3b), which lacks plural agreement, as ‘ungrammatical’ and “uninterpretable”, most speakers accept both sentences in (3), and statistical counts of attested structures (such as Graudina et al. 1976, pp. 27-29, based on a 100,000 word corpus of Russian texts, mainly newspaper articles from the late 1960’s and early 1970’s) show that the lack of plural agreement is nearly always the preferred (i.e., the more frequent) form.
b. Prošlo neskó’ko minut.
\hspace{1cm} passed.NEUT several minutes
Several minutes have passed.

Another factor that affects the preferences for plural vs. default neuter agreement pattern is the form of the predicate itself; for instance, Graudina et al. (1976, p. 28) note that short form adjectival predicates tend to appear with plural agreement (regardless of the properties of the subject itself), and Yakov Testelets (personal communication) has pointed out to me that tense (past vs. non-past) is another factor affecting the preferences for plural vs. default agreement.\(^\text{10}\) Importantly, these factors determine preferences (and statistical tendencies) rather than absolute grammaticality judgments; perfectly grammatical counterexamples to each of Graudina et al.’s generalizations have been attested and noted by the authors themselves. In what follows, these factors are taken into consideration in order to construct the most felicitous examples to illustrate the relevant contrasts in the clearest way. But what stands behind these preferences? I suggest that such preferences and gradient acceptability judgments reflect the ease with which speakers can construct the relevant interpretations given the lexical and constructional material given in each example.\(^\text{11}\)

When asked to explain their choices, speakers note subtle interpretational differences between sentences with and without plural agreement which can be summarized as follows: plural agreement in (3a) correlates with what is known in Slavic literature as ‘individuated interpretation’ (i.e., non-group, non-mass interpretation) whereas the lack of plural agreement (i.e., the default 3\textsuperscript{rd} person neuter agreement) in (3b) correlates with a ‘non-individuated’ or group interpretation.\(^\text{12}\) This contrast in the availability of individuated interpretation is brought out by the following example:

\(5\) Rol’ Džejmsa Bonda ispolnjali /#ispolnjalo [pjat’ izvestnyx aktërov].
role James Bond performed.PL/#performed.NEUT five famous actors
Five famous actors performed the role of James Bond.

Since the role of James Bond was performed by each actor individually, on separate occasions, in different films, only the individuated interpretation is appropriate for the subject. That is why speakers judge the neuter agreement pattern as unacceptable here.\(^\text{13}\)

\(^{10}\) Yet another factor in the literature is the word order: it has been observed that the plural agreement is preferable with preverbal subjects and neuter agreement – with postverbal subjects. I come back to the issue of word order in section 2.1.2 below.

\(^{11}\) Thanks to Nigel Duffield (personal communication) for helpful discussion of gradient grammaticality.

\(^{12}\) The concept of ‘individuated interpretation’ goes back to the literature on the genitive of negation construction in Russian (see Klenin 1980; Timberlake 1986). The differences in interpretation are mentioned in Graudina et al. (1976), Crockett (1976), Corbett (1983), Babby (1987), among others.

\(^{13}\) My consultants judge this and similar sentences with the neuter agreement pattern as anywhere from marginal to completely ungrammatical, but all of them note the contrast and prefer the plural agreement pattern. Those who judge the sentence in (5) as marginally acceptable give it only one interpretation: several actors play the same role in the same film (perhaps in different scenes, or as body doubles or stunt doubles), and surely enough the only example of this type found on the Internet describes exactly this situation (from a review of “Sleepy Hollow” at http://www.gothic.ru/cinema/database/sleepy_hollow2.htm):

\(\text{(i)}\) ... rol’ kotorogo ... ispolnjalo tri čeloveka – Kristofer Uoken, kogda
role of-whom performed.NEUT three people Christopher Walken when
vsadnik eščë byl s golovoj, specialist po vostočnym edinoborstvam i
horseman still was with head specialist on Oriental martial-arts and
xolodnomu oružiju Rèj Park dlja “pešix” épizodov i virtuoznyj naezdnik Rob
cold arms Ray Park for pedestrian episodes and virtuoso horseman Rob
Inč dlja konnyx scen.
Inch for equestrian scenes
The choice of agreement pattern also correlates with other properties of the subject. For example, only agreeing subjects can have specific reference, that is, are compatible with adjectives denoting specificity. In contrast, non-agreeing subjects are incompatible with such adjectives.\(^{14}\)

(6) a. V Mariinskem teatre **tancevali** [opredelennyje pjat’ balerin].
in Mariinsky theater danced.PL certain five ballerinas
A certain five ballerinas danced in the Mariinsky Theater.

b. * V Mariinskem teatre **tancevalo** [opredelennyje pjat’ balerin].
in Mariinsky theater danced.NEUT certain five ballerinas
intended: A certain five ballerinas danced in the Mariinsky Theater.

Note that in order to get the specific interpretation, the adjective must precede the numeral; otherwise, the nominal means ‘five ballerinas of a certain kind’. In this case, both agreeing and non-agreeing subjects are grammatical.

(7) a. V Mariinskem teatre **tancevali** [pjat’ opredelennyx ballerinas].
in Mariinsky Theater danced five ballerinas of a certain kind.

b. V Mariinskem teatre **tancevalo** [pjat’ opredelennyx ballerinas].
in Mariinsky Theater danced five ballerinas of a certain kind.

Similarly, there is a correlation between agreement patterns and the availability of a partitive interpretation (in the sense of referring to a subset of a previously introduced set). Only agreeing subjects allow such a partitive interpretation. Thus, (8b) but not (8c) is acceptable as a continuation of (8a). More generally, (8c) is ungrammatical (i.e., there is no context in which it is acceptable) because *pjatero iz nix* ‘five of them’ can only be interpreted partitively, but this interpretation is unavailable with neuter agreement on the verb.\(^{15}\)

(8) a. V naš gorod {priexala gruppa balerin / priexali baleriny} iz Peterburga.
to our town came group ballerinas.GEN / came ballerinas from Petersburg
A group of ballerinas from St. Petersburg came to our town.

b. … vo včerašnem koncerte **tancevali** [pjatero iz nix].
in yesterday’s concert danced.PL five from them
Five of them danced in yesterday’s concert.

c. * … vo včerašnem koncerte **tancevalo** [pjatero iz nix].
in yesterday’s concert danced.NEUT five from them
intended: Five of them danced in yesterday’s concert.

Yet another correlation is between agreement patterns and scopal possibilities. Although Russian speakers generally prefer the interpretations where the scopal relations are isomorphic with the surface linear order, sometimes the non-isomorphic scope is allowed as well. Specifically, an agreeing subject can have a non-isomorphic wide scope (or specific) interpretation, while a non-agreeing subject cannot. Thus, the sentence in (9a) is ambiguous: it can mean either (i) that every time Bond was operated on there were some five surgeons (not necessarily the same ones every time) who

\(^{14}\) As was pointed out to me by an anonymous reviewer, the English translation of (6a) favors group interpretation. Note that the Russian sentence itself favors individuated interpretation.

\(^{15}\) The judgments are the same if *pjatero iz nix* ‘five of them’ is replaced with *iz nix pjatero* ‘of them five’, or with *pjat’ iz nix* ‘five of them’ (with the non-collective form of the numeral). A potentially confounding factor here is that the partitive interpretation favors the subject-initial order, while the non-agreeing subject favors the post-verbal position (see fn. 10).
did it, or (ii) that the same five surgeons were always called on to perform surgery on 007. In contrast, the sentence in (9b) is unambiguous: the latter interpretation is unacceptable, and the former, isomorphic interpretation the only acceptable one. 16 (Similarly, only agreeing subjects can take wide scope with respect to negation, whereas non-agreeing subjects obligatorily take narrow scope.)

   every time five surgeons operated.PL Bond  
   Every time five surgeons operated on Bond. (ambiguous: ∀ > 5 or 5 ∀)

   every time five surgeons operated.NEUT Bond  
   Every time five surgeons operated on Bond. (unambiguous: ∀ > 5)

In addition to the correlation between agreement patterns and interpretative possibilities, we find a correlation between agreement and the possibility of control, noted in Franks (1994) and illustrated in (10) below. Only agreeing subjects can control PRO in an infinitival clause in (10a), a gerund in (10b), or a depictive secondary predicate in (10c-d). Note that neither substituting a neuter singular secondary predicate in (10c-d) nor word order permutations in all of these examples have any effect on the grammaticality.

(10) a. [Pjat’ banditov]i pytalis’ /*pytalos’ [PRO ubit’ Džemsa Bonda].  
   five thugs tried.PL /*tried.NEUT to-kill James Bond  
   Five thugs tried to kill James Bond.

b. [Pjat’ banditov]i ležali /*ležalo na zemle [PROi ne otkryvaja glaz].  
   five thugs lay.PL /*lay.NEUT on ground not opening eyes  
   Five thugs lay on the ground without opening their eyes.

c. [Pjat’ banditov]i ležali /*ležalo na zemle [PROi ranenye].  
   five thugs lay.PL/*lay.NEUT on ground wounded.PL.NOM  
   Five thugs lay on the ground wounded.

d. [Pjat’ razvedčikov]i vernulis’ /*vernulos’ domoj [PROi gerojami].  
   five spies returned.PL/*returned.NEUT home heroes.INSTR  
   Five spies returned home as heroes.

Furthermore, we find a correlation between agreement and the possibility of anaphor binding (also noted in Franks 1994): only agreeing subjects can serve as antecedents of a reflexive or reciprocal anaphor. Once again, word order permutations have no effect on grammaticality. 17

16 Sentences with OVS order and universally quantified object get similar judgments. Speakers who indiscriminately accepted every interpretation for all sentences in the questionnaire and those who never allowed non-isomorphic interpretations at all (about 20% of all speakers consulted) were excluded from the pool.

17 Note that the above examples with neuter agreement – except (10a) with a complement infinitival clause, of course – improve greatly if the offending control or anaphor binding configuration is removed:

(i) a. [Pjat’ banditov] ležalo na zemle.  
   five thugs lay.NEUT on ground  
   Five thugs lay on the ground.

b. [Pjat’ banditov] prikryvalo bankira ot pul’ Džejmsa Bonda.  
   five thugs shielded.NEUT banker from bullets James Bond  
   Five thugs shielded the banker from James Bond’s bullets.

c. [Pjat’ razvedčikov]i vernulos’ domoj.  
   five spies returned.NEUT home  
   Five spies returned home.
(11) a. [Pjat’ banditov] prikryvali /*prikryvalo  sebja ot  pul’  Džejmsa Bonda.  
 five thugs shielded.PL/*shielded.NEUT self from bullets James Bond  
Five thugs shielded themselves from James Bond’s bullets.

b. [Pjat’ banditov] prikryvali /*prikryvalo  druga ot  pul’  Džejmsa Bonda.  
five thugs shielded.PL/*shielded.NEUT each other from bullets James Bond  
Five thugs shielded each other from James Bond’s bullets.

It must be noted that the ungrammaticality of a non-agreeing subject as an antecedent of a reflexive is limited to independent (i.e., pronominal) reflexives; non-agreeing subjects can co-occur with the verbal reflexive marker -sja, as shown in (12) below. I return to this issue in section 4 below.

(12) [Pjat’ banditov] prikryvalis’ /prikryvalos’  ot  pul’  Džejmsa Bonda.  
five thugs shielded.PL-sja/shielded.NEUT-sja  from bullets James Bond  
Five thugs shielded themselves from James Bond’s bullets.

In contrast to control and anaphor binding, which require an agreeing subject, there is a construction in Russian which requires a non-agreeing subject – the so-called ‘Approximative Inversion’ (see Franks 1994, Billings 1995). In this construction, the noun appears before the numeral, with the resulting approximative interpretation.

(13) V ètom restorane obedalo / *obedali  [čelovek desjat’].  
 in this  restaurant dined.NEUT / *dined.PL  people  ten  
In this restaurant dined approximately ten people.

As expected, Approximative Inversion (which is possible only with non-agreeing subjects) is incompatible with control or anaphor binding (both of which are possible only with agreeing subjects); see Franks (1994), Yadroff and Billings (1998, p. 326).\(^\text{18}\)

(14) a. *[Banditov dvadcat’]i pytalis’ /pytalos’  [PROi ubit’  Džemsa Bonda].  
thugs twenty tried.PL/tried.NEUT to-kill James Bond  
intended: Approximately twenty thugs tried to kill James Bond.

b.*[Banditov dvadcat’], prikryvali /prikryvalo  sebjai ot  pul’  Džejmsa Bonda.  
thugs twenty shielded.PL/shielded.NEUT self from bullets James Bond  
intended: Approximately 20 thugs shielded themselves from James Bond’s bullets.

Finally, agreeing and non-agreeing subjects differ in the types of pronominal elements that can replace them: while agreeing subjects can be replaced by personal pronouns and most of the indefinite and interrogative pronouns, non-agreeing subjects can be replaced only by stol’ko ‘that much/many’ and skol’ko ‘how much/many’ (I thank Yakov Testelets for bringing these data to my attention):

he  danced.PL/*danced.NEUT  tango  
They danced tango.

he.DAT that-much not needed.NEUT / *needed.PL  
He doesn’t need that much.

The correlations described and illustrated above are summarized in Table 1 below.

\(^\text{18}\) Yadroff and Billings (1998, pp. 325-326) also note that Approximative Inversion is incompatible with either an individuated interpretation (‘individual/list reading’, in their terminology) or a wide scope interpretation. This is again expected since Approximative inversion is possible only with non-agreeing subjects and both individuated and wide scope interpretations are possible only with agreeing subjects, as discussed in the main text above.
Table 1. Agreeing vs. non-agreeing subjects in Russian

<table>
<thead>
<tr>
<th>contrast</th>
<th>agreeing subjects</th>
<th>non-agreeing subjects</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>individuated interpretation</td>
<td>✓</td>
<td>*</td>
<td>(5)</td>
</tr>
<tr>
<td>specific interpretation</td>
<td>✓</td>
<td>*</td>
<td>(6), (7)</td>
</tr>
<tr>
<td>partitive interpretation</td>
<td>✓</td>
<td>*</td>
<td>(8)</td>
</tr>
<tr>
<td>non-isomorphic wide scope</td>
<td>✓</td>
<td>*</td>
<td>(9)</td>
</tr>
<tr>
<td>controller of PRO</td>
<td>✓</td>
<td>*</td>
<td>(10)</td>
</tr>
<tr>
<td>antecedent of anaphor</td>
<td>✓</td>
<td>*</td>
<td>(11)</td>
</tr>
<tr>
<td>Approximative Inversion</td>
<td>*</td>
<td>✓</td>
<td>(13)</td>
</tr>
<tr>
<td>pronominal elements</td>
<td>personal pronouns</td>
<td></td>
<td>stol’ko, skol’ko</td>
</tr>
</tbody>
</table>

The obvious question is how these correlations can be accounted for. Developing ideas in Franks and Pereltsvaig (2004), I propose the Small Nominal Hypothesis, namely that the two types of subjects differ in their internal structure: agreeing subjects are DPs, whereas non-agreeing subjects are Small Nominals (specifically, QPs lacking the DP projection), as schematized below.

(16) Small Nominal Hypothesis

a. AGREEING SUBJECTS
b. NON-AGREEING SUBJECTS

Furthermore, I propose that DPs and Small Nominals are of a different semantic type: DPs are referential in the sense of picking out an individual referent, while Small Nominals are non-referential (i.e., not individual-denoting) expressions. This allows us to account for the correlations summarized in Table 1: since non-agreeing Small Nominal subjects are neither referential nor quantificational (in the same way generalized quantifiers are), they cannot have an individuated interpretation, nor a specific or a partitive interpretation. For the same reason, a Small Nominal subject does not take a non-isomorphic wide scope. Finally, since a Small Nominal subject lacks its own reference and the DP projection, there is nothing that can be matched against the reference of PRO, a reflexive or a reciprocal anaphor; hence Small Nominal subjects can be neither controllers nor antecedents. Furthermore, I claim that the correlation between agreement and Approximative Inversion can be accounted for in semantic terms as well: approximation is not possible over individuals; hence the impossibility of *approximately Bill and Jill. Therefore, Approximative Inversion is possible only with non-individual-denoting Small Nominals and not with individual-denoting DPs.19 This semantic approach to Approximative Inversion is further supported by the fact that structurally different approximative constructions likewise force neuter agreement on the predicate; in terms of the analysis proposed in this paper, such other approximative constructions too can appear only in a Small Nominal, not a DP or a PP. What all these construction have in common is not their syntactic derivation, but their approximative meaning. These include constructions with approximative prepositions okolo ‘about’ and s ‘with’, as well as constructions with the classifier-like items čelo’vek ‘persons’, štuk ‘items’, golov ‘heads’. The plural agreement with such subjects has a very marginal

19 Cf. Yadroff and Billings (1998, pp. 324-325). Although Yadroff and Billings claim that Approximative Inversion does not involve a QP, what they mean by QP is different from the use of this label in the present paper. For them, QP is merged above rather than below DP. My QP corresponds to their NumberP.
status; many speakers do not accept it at all (example (17a) is from Graudina et al. 1976:29-30 and
the grammatical examples in (17b-c) have been attested on the Internet).

(17) a. \([QP \text{ Okolo milliona } \overset{č}{\text{čelovek v den’}} \{\overset{pereezžaet}{
move.NEUT/??move.PL} \text{ na dači.}}\]

about million people in day move.NEUT/??move.PL to summer-houses

Approximately a million people a day move to their summer houses.

b. \([QP S \text{ sotnju } \overset{č}{\text{čelovek}} \{\overset{manipuliruet}{
manipulate.NEUT/??manipulate.PL} \text{ 6 milliardami ljudej na zemle.}}\]

near hundred people manipulate.NEUT/??manipulate.PL six billions people on Earth.

Some hundred people manipulate 6 billion people on Earth.

c. \([QP Č \overset{č}{\text{čelovek desjat’ terroristov s pistoletami}} \{\overset{stoit}{
stand.NEUT/??stand.PL} \text{ vo dvore.}}\]

persons ten terrorists with handguns stand.NEUT/??stand.PL in yard

About 10 terrorists with handguns stand in the yard.

Finally, we can distinguish two types of pronominal elements in Russian: pro-DPs (including personal
pronouns and most interrogative and indefinite pronouns) and pro-Q or pro-QP elements, such as
skol’ko ‘how much/many’ and stol’ko ‘that much/many’.

2.1.2. Against the Positional Alternative

Let us now consider what I shall call a ‘Positional Alternative’, namely an analysis of the contrasts
between agreeing and non-agreeing subjects in terms of their position in a clause rather than their
internal structure. An analysis along these lines has been proposed by Pesetsky (1982), further
developed by Franks (1994), and later adopted by Stepanov (2001) and Bošković (2003). According
to this Positional Alternative, agreeing subjects appear in Spec-TP, whereas non-agreeing subjects
appear in Spec-VP, as schematized below (base-positions shown with strikethrough):

(18) Positional Alternative – Subjects

\[
\begin{array}{c}
\text{AGREEING SUBJECTS} \\
\text{TP} \\
\text{SUBJ TP} \\
\text{T° VP} \\
\text{[PL] SUBJ VP} \\
\text{V°}
\end{array}
\]

\[
\begin{array}{c}
\text{NON-AGREEING SUBJECTS} \\
\text{TP} \\
\text{TP} \\
\text{T° VP} \\
\text{[NEUT] SUBJ VP} \\
\text{V°}
\end{array}
\]

Several arguments have been put forward in support of this Positional Alternative: the that-
trace effect, Approximative Inversion, and preferences for the postverbal position with non-agreeing
subjects. In what follows, I consider these arguments in turn and show that there is no strong
evidence for the Positional Alternative and that, in fact, it makes certain wrong predictions.

---

20 Both Pesetsky (1982) and Franks (1994) developed a combined analysis whereby agreeing subjects are DPs
(NPs in Pesetsky’s terminology) and are in Spec-IP, while non-agreeing subjects are QPs and in a lower
structural position.

(both of which are described in the main text above). However, as noted in the main text, both binding and
control facts can be accounted for in semantic terms under the Small Nominal Hypothesis as well, so they do not
sway the argument one way or another.
One argument put forward by Franks (1994) in support of the Positional Alternative involves the *that*-trace effect contrast, illustrated below (judgments from Franks 1994, but see below).

(19) a. Skol’ko balerin Ivan dumaet čto ispolnjalo tanec malen’kix lebedej?
    *how-many ballerinas Ivan thinks that performed.NEUT dance small swans*
    How many ballerinas does Ivan think that performed the Small Swan dance?

b. *Skol’ko balerin Ivan dumaet čto ispolnjali tanec malen’kix lebedej?
    *how-many ballerinas Ivan thinks that performed.PL dance small swans*
    intended: How many ballerinas does Ivan think performed the Small Swan dance?

According to Franks (1994), sentences with non-agreeing subjects do not show the *that*-trace effect because such subjects are in Spec-VP and not in Spec-TP, in contrast to sentences with agreeing subjects, which are in Spec-TP, thus creating the *that*-trace effect. However, it appears that this argument rests on a shaky empirical ground: of the 24 speakers I have consulted about these sentences, only two (8%) agreed with the judgments presented in Franks (1994). Although nine additional speakers (38%) marginally preferred (19a) over (19b) when pressed to differentiate between them, nine speakers (38%) perceived no contrast in grammaticality whatsoever, and four speakers (17%) gave the opposite judgments to those reported in Franks (1994), preferring (19b) over (19a). Overall, the majority of the speakers (75%) judged both sentences as ungrammatical or unacceptable. Thus, there appears to be no contrast between agreeing and non-agreeing subjects in triggering the *that*-trace effect; the facts do not support the Positional Alternative in this respect.

The second argument in support of the Positional Alternative, proposed by Stepanov (2001), involves Approximative Inversion. Recall from above that Approximative Inversion is possible only with non-agreeing subjects. Stepanov develops an account of this distribution relying on the prohibition against (phrasal) adjunction to heads of non-trivial chains: assuming that agreeing subjects move to Spec-TP, they create non-trivial chains, adjunction to which is prohibited, making Approximative Inversion impossible with them. In contrast, non-agreeing subjects stay in the VP, creating no non-trivial chains and allowing adjunction (i.e., Approximative Inversion). Although Stepanov’s analysis is appealing in that it relates Approximative Inversion to other adjunction phenomena, it relies on a crucial assumption, adopted from Franks (1994), namely that Approximate Inversion is phrasal adjunction. But this assumption appears to be problematic in light of the following facts: modifiers in (20), complements in (21), and possessors in (22) must be stranded after the numeral under Approximative Inversion:

(20) a. knig desjat’ interesnyx
    *books.GEN ten interesting.GEN*
    approximately ten interesting books

b. *interesnyx knig desjat’*
    *interesting.GEN books.GEN ten*
    intended: approximately ten interesting books

(21) a. izobraženij desjat’ britanskogo flaga
    *pictures.GEN ten British flag*
    approximately ten pictures of the British flag

b. *izobraženij britanskogo flaga desjat’*
    *pictures.GEN British flag ten*
    intended: approximately ten pictures of the British flag

---

22 Yadroff and Billings (1998) claim that examples like (20a) are ungrammatical unless the adjective is stressed or coordinated; my consultants judged these examples as grammatical even when these conditions did not apply. Crucially for the present purposes, Yadroff and Billings (1998) agree that the adjective cannot be inverted together with the noun.
Hence, it appears that Approximative Inversion involves head movement rather than phrasal movement. An alternative analysis of Approximative Inversion in terms of remnant NP-movement has been suggested to me by Marcel den Dikken (personal communication). Although a detailed discussion of this alternative goes beyond the scope of this paper, I will note here that the head movement analysis is supported by the fact that Approximative Inversion is blocked by an intervening head. As discussed extensively by Babby (e.g., Babby 1987) and others, Russian numerals exhibit two patterns of case marking. When the nominal containing a numeral appears in a structural (Nominative or Accusative) case position, as in (23a), its internal case distribution is heterogeneous: the quantifier is marked Nominative or Accusative and its complement is marked Genitive. In contrast, when the nominal appears in an oblique case position, as in (23b), its internal case distribution is homogeneous: both the quantifier and its complement are marked with the same oblique case.

\[(23)\] 

\[\text{a. On znajet [desjat’ jazykov].} \quad \text{b. On vladejet [desjatju jazykami].}\]

\[\text{he knows ten.ACC languages.GEN} \quad \text{he knows ten.INSTR languages.INSTR}\]

He knows ten languages. He knows ten languages.

Based on the distribution of such PP quantity expression as *do xrena ‘a lot’ (lit. ‘to horseradish’), Bailyn (2004) concludes that in nominals with the heterogeneous pattern the quantifier is merged as a Spec, while in nominals with the homogeneous pattern the quantifier is merged as a head. To return to Approximative Inversion, it turns out that it is grammatical in nominals with the heterogeneous pattern but not in nominals with the homogeneous pattern:

\[(24)\] 

\[\text{a. On znajet [jazykov desjat’].} \quad \text{b. * On vladejet [jazykami desjatju].}\]

\[\text{he knows languages.GEN ten.ACC} \quad \text{he knows languages.INSTR ten.INSTR}\]

He knows approximately ten languages. He knows ten languages.

Assuming Bailyn’s conclusion that the numeral is merged as a Spec in (24a) and as a Head in (24b), this contrast in grammaticality can be easily accounted for if we take Approximative Inversion to be an instance of Head movement: it is blocked by an intervening numeral head in (24b), but not by a numeral in Spec in (24a). On the other hand, if we take Approximative Inversion to be an instance of Phrasal movement, this contrast remains mysterious.\(^{23}\)

Given that Approximative Inversion is Head movement rather than Phrasal movement, Stepanov’s analysis in terms of a prohibition against phrasal adjunction to heads of non-trivial chains does not apply. The failure of the Positional Alternative to account for the facts concerning Approximative Inversion weakens its appeal as a compelling alternative to the Small Nominal Hypothesis argued for in this paper.

\footnote{23 The question arises as to what head the noun inverts to under Approximative Inversion. It appears that a special Modality-like or Evidential-like head is involved in various approximative constructions, which can be filled either by Move (i.e., Approximative Inversion, moving either the noun, as in (20)-(22), or a classifier-like item, e.g., \textit{čelovek ‘people’, štuk ‘items’, etc., as in (17c)} or by Merge of one of a number of heads (e.g., \textit{okolo ‘near’ in (17a), s ‘near, with’ in (17b), or \textit{priblizitel’no ‘approximately’}); note that the latter constructions which involve Merge and not Move are a problem for Stepanov’s approach to Approximative Inversion. A detailed analysis of approximative constructions in Russian goes beyond the scope of this paper; for some discussion, see Billings (1995), Billings and Yadroff (1996), Yadroff and Billings (1998).}
Finally, let us consider the issue of the word order. It has been noted in the literature that some speakers prefer agreeing subjects preverbally and non-agreeing subjects postverbally. This has been taken as support for the Positional Alternative, namely that agreeing and non-agreeing subjects (i.e., appearing with plural and neuter agreement, respectively) occur in different syntactic positions. However, a closer consideration of both speaker judgments and corpora indicates that such a correlation between subject position and agreement determines only preferences with respect to the choice of agreement form, not an absolute grammaticality judgment. As is generally the case in Russian, information structure and intonation heavily affect the choice of word order; and these factors are independent of agreement patterns (and go beyond the scope of this paper). Here, I propose that these preferences for agreeing or non-agreeing subjects are determined by the ease of contextualizing the relevant examples and getting a non-individuated interpretation. The preverbal position tends to be occupied by ‘old information’, which also tends to be individuated. Therefore, individuated (agreeing) DP subjects tend to appear preverbally, making (non-agreeing) Small Nominal subjects more likely to appear postverbally. Note, however, that neither preverbal non-agreeing Small Nominal subjects nor postverbal agreeing DP subjects are, strictly speaking, ungrammatical (see fully grammatical examples in (17) and (4a), respectively). Thus, the Positional Alternative makes too strong a claim about the position of agreeing and non-agreeing subjects.24

To summarize, there is no strong evidence in support of the Positional Alternative to the Small Nominal Hypothesis: some arguments (i.e., those involving anaphor binding and control) can be accounted for in an alternative way based on the semantic distinction between individual-denoting DPs and non-individual-denoting Small Nominals; other arguments (i.e., those concerning the that-trace effect and Approximative Inversion) rely on problematic assumptions or faulty data. Hence, I

---

24 Note that certain Northern Italian Dialects (NIDs; including Venetian, Veneto, Ligurian, and many Lombard dialects, but not Friulian and Piedmontese) also distinguish between two types of subjects: preverbal agreeing and postverbal non-agreeing subjects – see (i) below – but in these dialects the correlation between position and agreement is strict, suggesting further support for the Positional Alternative.

(i) a. [QP do fie].
   is died.MASC.SG two girls
   There have died two girls.

   b. [DP Do fie] (le) ze morte.
      two girls (they) is died.PL.FEM
      Two girls have died.

However, it appears that the contrast between the two types of subjects in NIDs is not the same phenomenon as the contrast between the two types of subjects in Russian, discussed in this paper. One crucial dissimilarity between the NID contrast and the Russian contrast is that the former is limited to subjects of unaccusative verbs, whereas the latter applies regardless of the verb’s lexical semantics. Moreover, it is not clear whether other properties of these two types of subjects in NIDs align with properties of Russian agreeing and non-agreeing subjects: although preverbal agreeing and postverbal non-agreeing subjects in NIDs appear to contrast in terms of control, they do not exhibit any difference in interpretation (e.g., partitive or specific interpretation) or binding. I thank Cecilia Poletto (personal communication) for providing NID data.

Note further that a similar phenomenon is found in (colloquial) Hebrew: as reported in Danon (2002, pp. 145-150), “for many speakers, certain unaccusative or passive verbs are acceptable without agreeing with the overt [indefinite bare or quantity] argument, instead showing default agreement (3rd person singular)”; idiomatic constructions as in (iii) are more widely acceptable without agreement than non-idiomatic ones in (ii).

(ii) nafal alay egozey kokos.
    fell.MASC.SG on-me nut.MASC.PL coconut
    Some coconuts fell on me.

(iii) magi’a lo makot.
    arrive.MASC.SG to-him blows.FEM.PL
    He deserves spanking.

Two properties of these constructions make them similar to the NID in (i) and not to the Russian data discussed in the main text: the no-agreement option is limited to the postverbal position and to unaccusatives and passives.
conclude that the Positional Alternative is not a viable substitute for the Small Nominal Hypothesis. An additional blow to the Positional Alternative comes from the fact that the same contrasts listed in Table 1 above and described under the Small Nominal Hypothesis as contrasts between DPs and Small Nominals are found with respect to objects as well as subjects, something that the Positional Alternative, applying exclusively to subjects, cannot account for. It is these contrasts between DP and Small Nominal objects that I turn to next.

2.2. Small Nominals in object position

In the previous section, I considered quantity nominals in subject position in Russian and showed that they can be either DPs or Small Nominals (e.g., QPs). In this section, I show that Small Nominals can be found in object position as well. In fact, I make an even stronger claim here: not only can Small Nominals appear in argument positions, but they can be specifically selected by a head. One example of a head which I claim to select a Small Nominal (specifically, a QP) rather than a DP is the Russian (perfectivizing) cumulative prefix na-, illustrated in (25b) below.25

(25) a. Džejms Bond skopiroval čerteži.
   James Bond copied blueprints.ACC
   James Bond copied {some/the} blueprints.

   b. Džejms Bond nakopiroval čertežej.
   James Bond CUM-copied blueprints.GEN
   James Bond copied (many) blueprints.

   To show that the object in (25b) is a Small Nominal, specifically a QP, we need to consider the case patterns here. As can be seen from the sentences in (25), the object of the verb with the cumulative na- is marked genitive, whereas the object of the bare stem is marked accusative. The traditional account of this contrast directly ascribes the genitive case assignment to the verb with the cumulative na-; such verbs are assimilated to other verbs assigning idiosyncratic (or quirky) genitive, for example kasat’sja ‘to touch’ (the following example is from B. Akunin’s Ljubovnik Smerti).

(26) Sprygnul, ne kosnuvšis’ nogoj podnožki.
   jumped-off not having-touched foot.INSTR footboard.GEN
   He jumped off without touching the footboard with his foot.

   However, such an analysis in terms of idiosyncratic case is problematic in light of the following fact: when a quantity noun, as in (27), is present, it is marked accusative, not genitive; the NP complement of the quantifier is still marked genitive.

(27) a. Džejms Bond nakopiroval djužinu čertežej.
   James Bond CUM-copied dozen.ACC.SG blueprints.GEN
   James Bond copied a whopping dozen blueprints.

   b. *Džejms Bond nakopiroval djužiny čertežej.
   James Bond CUM-copied dozen.GEN.SG blueprints.GEN
   intended: James Bond copied a whopping dozen blueprints.

   Developing ideas in Franks and Pereltsvaig (2004) and Bailyn (2004), I propose to place the burden of explanation on phrase structure and selection rather than case theory. More specifically, I propose that the cumulative na- always selects a QP argument. In examples like (27a), a QP is merged to host an overt quantity expression. As far as examples where no overt quantity expression is present (such as (25b)) are concerned, I maintain that they are still QPs containing a null Q°. Going back to the case patterns in these sentences, the NP complement of Q° is assigned genitive by Q°; this proposal applies regardless of whether there is anything overt in QP or not (the original idea that null quantifiers are responsible for the genitive in such cases as the genitive of negation and other quantificational structures is due to Pesetsky 1982). If an overt quantity expression is present, as in

---

25 In section 2.2.1 below I come back to the claim that it is the cumulative prefix na- itself rather than the verbal stem that selects the argument.
Small Nominals

In sum, so far I have established that objects of verbs with the cumulative *na*- are minimally QPs (which accounts for the genitive case marking on the NP inside the QP). But could they be fully projected as DPs? My claim here is that they crucially cannot be DPs, as evidenced by the fact that these nominals cannot include D-level elements, such as a demonstrative, a pronoun, or a proper name.

(28) a.*Džejms Bond napriglašal [ètu djužinu krasotok].
   *James Bond CUM-invited this dozen babes
   intended: James Bond invited these dozen babes.

b. *Džejms Bond napriglašal [{nas / menja}].
   *James Bond CUM-invited us me
   intended: James Bond invited {us / me} a lot.

c. *Džejms Bond napriglašal [{Ivanovyx / Ivanova}].
   *James Bond CUM-invited Ivanovs / Ivanov
   intended: James Bond invited {the Ivanovs / Ivanov} a lot.

In contrast, objects of stems with no cumulative *na*- allow such D-level elements:

(29) a. Džejms Bond priglasil [ètu djužinu krasotok].
   James Bond invited this dozen babes
   James Bond invited these dozen babes.

b. Džejms Bond priglasil [{nas / menja}].
   James Bond invited us me
   James Bond invited {us / me}.

c. Džejms Bond priglasil [{Ivanovyx / Ivanova}].
   James Bond invited Ivanovs / Ivanov
   James Bond invited {the Ivanovs / Ivanov}.

Note further that objects of verbs with the cumulative *na*- can be replaced by pro-QP elements, such as *skol’ko* ‘how much/many’, *stol’ko* ‘that much/many’:

(i) a. Oleg napilsja [QP vody].
   Oleg CUM-drink-SJA water.GEN
   Oleg drank water to his heart’s content.

b. *Oleg napilsja [QP vedro vody].
   Oleg CUM-drink-SJA bucket.ACC water.GEN
   intended: Oleg drank a bucketful of water to his heart’s content.

26 Note, however, that a null Q° does not need case; hence, it is grammatical with verbs containing the morpheme –*sja*, which is said to absorb the accusative case, whereas overt quantity expressions in such contexts are ungrammatical.

(i) a. Étot pilot uže naletal [QP *(desjat’ tysjač) mil’].
   this pilot already CUM-flew ten thousand miles.GEN
   This pilot has already flown 10,000 miles. BUT NOT: … flown (lots of) miles.

However, whether or not the quantity expression may be omitted in each case appears to depend on pragmatic factors; note the grammaticality of the following example (in the context of frequent flyer miles):

(ii) Étot passažir uže naletal [QP mil’].
    this passenger already CUM-flew miles.GEN
    This passenger has already flown (lots of) miles.

27 This null-Q analysis for arguments of the cumulative *na*- is further supported by the fact that in some cases the quantity expression cannot be omitted (especially, with unergative roots). I thank Eugenia Romanova for bringing these examples to my attention.
(30) a. Džejms Bond nakopiroval [stol’ko čertežej]!
James Bond CUM-copied that-many blueprints
James Bond copied so many blueprints!

b. [Skol’ko čertežej] nakopiroval Džejms Bond?
how-many blueprints CUM-copied James Bond
How many blueprints did James Bond copy?

To recapitulate, objects of verbs with the cumulative na- are selected as Small Nominals (specifically, QPs). This Small Nominal Hypothesis is further supported by the fact that, just like Small Nominal subjects considered in the previous subsection, Small Nominal objects behave as non-referential expressions with respect to the same tests, summarized for objects in Table 2 below.

**Table 2. Objects of verbs with the cumulative na- vs. other objects in Russian**

<table>
<thead>
<tr>
<th>contrast</th>
<th>objects w/ cumulative na-</th>
<th>other objects</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>individuated interpretation</td>
<td>*</td>
<td>✓</td>
<td>(31)</td>
</tr>
<tr>
<td>specific interpretation</td>
<td>*</td>
<td>✓</td>
<td>(32)-(34)</td>
</tr>
<tr>
<td>partitive interpretation</td>
<td>*</td>
<td>✓</td>
<td>(35)</td>
</tr>
<tr>
<td>non-isomorphic wide scope</td>
<td>*</td>
<td>✓</td>
<td>(36)</td>
</tr>
<tr>
<td>controller of PRO</td>
<td>*</td>
<td>✓</td>
<td>(37)-(40)</td>
</tr>
<tr>
<td>antecedent of anaphor</td>
<td>*</td>
<td>✓</td>
<td>(41)</td>
</tr>
<tr>
<td>Approximative Inversion</td>
<td>✓</td>
<td>*</td>
<td>(42)-(43)</td>
</tr>
<tr>
<td>pronominal elements</td>
<td>pro-QPs/*pro-DPs</td>
<td>pro-DPs</td>
<td>(30) above</td>
</tr>
</tbody>
</table>

First, verbs that select an individuated object are incompatible with the cumulative na-:

(31)  * Džejms Bond naljubil [krasivyx ženščin].
James Bond CUM-loved beautiful women
intended: James Bond loved many beautiful women.

Second, arguments of the cumulative na- are incompatible with adjectives denoting specificity (cf. Filip 1992); the only possibility is to mark such adjectives with the genitive case, with the resulting interpretation being the kind interpretation (see discussion regarding (7) above):

(32) a. Džejms Bond nasobiral [opredelënnuyu oxapku cvetov].
James Bond CUM-picked particular armful flowers
intended: James Bond picked a particular armful of flowers.

Furthermore, if a quantity expression is present, it cannot be modified by a specificity adjective:

(33)  * Džejms Bond nasobiral [opredelënnyx cvetov].
James Bond CUM-picked certain.GEN flowers.GEN
intended: James Bond picked a certain amount of flowers.

In this respects objects of verbs with the cumulative na- contrast with other objects, which are compatible with adjectives denoting specificity:

(34) a. Džejms Bond sobral opredelënnye cvety.
James Bond picked certain.ACC flowers.ACC
James Bond picked up certain flowers.
b. Džejms Bond sobral opredelënnuju oxapku cvetov.
   James Bond picked certain.ACC armful.ACC flowers.GEN
James Bond picked up a certain armful of flowers.

The third test is partitivity: objects of verbs with the cumulative na- cannot have a partitive interpretation. Thus, (35b) is not a coherent continuation of (35a), although (35b) by itself is grammatical. In this respect the cumulative prefix na- contrasts with the delimitative prefix po-, the distributive prefix pere-, and the purely perfectivizing prefix na-, whose objects can have the partitive interpretation (for a discussion of these different prefixes, see Romanova and Diakonova 2003).

(35) a. Povarjata vymyli ovošči dlja salata…
   assistant-cooks washed vegetables for salad
Assistant cooks washed vegetables for a salad…

b.#… a potom povar našinkoval ovoščej.
   and then cook CUM-chopped vegetables.GEN
and then the cook chopped (a lot of) vegetables.

c. … a potom povar pošinkoval ovošči (s polčasa).
   and then cook DEL-chopped vegetables.ACC APPROX half-hour
and then the cook chopped (some of) these vegetables (for about half an hour).

d. … a potom povar perešinkoval (vse) ovošči.
   and then cook DISTR-chopped all.ACC vegetables.ACC
and then the cook chopped (all of) these vegetables, one by one.

e. … a potom povar našinkoval ovošči.
   and then cook chopped.PERF vegetables.ACC
and then the cook chopped these vegetables.

The fourth test distinguishing objects of verbs with the cumulative na- from other objects is scope. As discussed in the previous subsection, Small Nominals cannot take non-isomorphic wide scope (see discussion surrounding (9) above). As expected under the Small Nominal Hypothesis for objects of verbs with the cumulative na-, these objects cannot take non-isomorphic wide scope with respect to universally quantified expressions (Filip 2004 shows that objects of verbs with the cumulative na- cannot have wide scope with respect to negation either). The only interpretation available for the sentence in (36a) is the one where every agent copied some twelve blueprints or others (and they need not be the same blueprints for different agents). In contrast, the sentence in (36b), where the verb does not contain the cumulative na-, is ambiguous: it has the same reading as (36a) and the reading where the same dozen blueprints is copied by the every agent. Crucially, this latter reading is absolutely unavailable for (36a).

(36) a. Každyj agent nakopiroval [djužinu čertežej].
   every agent CUM-copied dozen blueprints
Every agent copied a (whopping) dozen blueprints. (unambiguous: ∀ > 12)

b. Každyj agent skopiroval [djužinu čertežej].
   every agent copied dozen blueprints
Every agent copied a dozen blueprints. (ambiguous: ∀ > 12 or 12 > ∀)

Next, consider control possibilities; here, I will consider two control configurations: secondary predication and infinitival clauses. First of all, objects of verbs with the cumulative na- are incompatible with instrumental secondary predicates:28

28 These examples become grammatical if the adjective appears in the genitive case. However, as indicated by the English translations in (i), such sentences receive only the postposed/scrambled restrictive modifier interpretation and not the depictive secondary predicate interpretation, hence they do not involve control.
(37) a.*On nasobiral $\text{sliv}_p$ $\text{nespelymi}$.  
\textit{he CUM-picked plums.GEN unripe.INSTR}  
intended: He picked a lot of plums unripe.

b. *On narezal $\text{ovoščej}_v$ $\text{syrymi}$.  
\textit{he CUM-chopped vegetables.GEN raw.INSTR}  
intended: He chopped a lot of vegetables raw.

c. *On nakolol $\text{drov}_f$ $\text{mokrymi}$.  
\textit{he CUM-chipped firewood.GEN wet.INSTR}  
intended: He chipped a lot of firewood wet.

In this respect, Small Nominal objects of the cumulative na- contrast with DP objects of bare stems (the latter can appear with secondary predicates):

(38) a. On sobiral $\text{sliv}_y^p$ $\text{nespelymi}$.  
\textit{he picked plums.ACC unripe.INSTR}  
He picked (the) plums unripe.

b. On rezal $\text{ovošči}_v$ $\text{syrymi}$.  
\textit{he chopped vegetables.ACC raw.INSTR}  
He chopped (the) vegetables raw.

c. On kolol $\text{drov}_f$ $\text{mokrymi}$.  
\textit{he chipped firewood.ACC wet.INSTR}  
He chipped (the) firewood wet.

Another relevant control configuration involves infinitival clauses, illustrated below. In the this example (and the following ones), the presence of a distributive construction in the infinitival clause requires a plural distributive key; essentially, the controller of PRO must be plural, which excludes the singular \textit{Džejms Bond} ‘James Bond’ as a possible controller. Therefore, only the object can serve as the controller of PRO in the infinitival clause.

(39) Džejms Bond$\text{ji}$ priglasil krasotok$\text{b}_b$ [PRO$^*_b$ vypit’ po martini].  
\textit{James Bond invited babes.ACC to-drink DISTR Martini}  
James Bond invited \{some/the\} babes for a Martini each.

As shown below, objects of verbs with the cumulative na- cannot serve as controllers of PRO in such constructions either, making the sentence ungrammatical.

(40) * Džejms Bond$\text{ni}$ napriglašal krasotok$\text{b}_b$ [PRO$^{*}_b$ vypit’ po martini].  
\textit{James Bond CUM-invited babes.GEN to-drink DISTR Martini}  
intended: James Bond invited (many) babes for a Martini each.

To summarize, objects of verbs with the cumulative na- fail to be controllers of PRO in both secondary predication and infinitival clause constructions. Under the analysis proposed in this paper, this is so because being Small Nominals, objects of verbs with the cumulative na- cannot serve as controllers of PRO (an analysis of this restriction is presented in section 4 below).
The next test involves anaphor binding. Since reflexives in Russian are notoriously subject-oriented, the data presented below involves reciprocals, which are not similarly restricted (see Rappaport 1986, p. 101). As is expected under the Small Nominal Hypothesis, objects of verbs with the cumulative na- fail to be antecedents of reciprocals; in contrast objects of other perfective verbs are acceptable as antecedents of reciprocals.

(41) a. *Bond napriglašal [krasotok], na dni roždenija [drug druga].
Bond CUM-invited babes on days birth each other
intended: Bond invited (many) babes to each other’s birthdays.

b. Bond priglasil [krasotok], na dni roždenija [drug druga].
Bond invited {some/the} babes on days birth each other
Bond invited {some/the} babes to each other’s birthdays.

Finally, objects of verbs with the cumulative na- can undergo the Approximative Inversion, as can be seen from the following example found on the Russian internet (note that, as expected, the Small Nominal object of the cumulative na- cannot take non-isomorphic scope with respect to the universal quantifier; thus, this sentence cannot be used to assert that the speaker picks the same ten books on every visit to a book store, then puts them back – e.g. if (s)he cannot afford them – only to pick them again on the next visit):

(42) Každyj raz v knižnom magazine ja nabiraju [knig desjat’].
Every time in book store I CUM-pick books.GEN ten
Every time I go to a book store, I pick a pile of about 10 books.

But note that AI is not possible in DP objects (of stems without the cumulative na-).

(43) a. *Džejms Bond zapakoval [èti galstukov dvadcat’].
James Bond packed these ties twenty
intended: James Bond packed up these approximately 20 ties.

b. Džejms Bond napakoval [galstukov dvadcat’].
James Bond CUM-packed ties twenty
James Bond packed approximately twenty ties.

In sum, objects of verbs with the cumulative na- pattern with other Small Nominals, such as non-agreeing QP subjects, with respect to the referentiality-related tests. This supports my analysis of such objects as Small Nominals (specifically, QPs).

29 Additional possible candidates for the status of a Small Nominal object in Russian are the so-called partitive objects in (i). I thank Yakov Testelets for bringing this to my attention.

(i) On vypil konjaku.
he drank.PERF brandy.GEN2
He drank some brandy.

These objects pattern with objects of the cumulative na- with respect to all applicable tests from Table 2; specifically, they cannot be modified by specificity adjectives (except with the kind interpretation), as in (ii a), cannot have partitive interpretation, as in (ii b), and cannot control PRO, as in (ii c).

(ii) a. On vypil opredelënnogo konjaku.
he drank.PERF certain.GEN brandy.GEN2
He drank some brandy of a certain kind. NOT: He drank certain small amount of brandy.

b. # Ona razlila konjak po stakanam, a potom on vypil konjaku.
she poured brandy DISTR glasses and then he drank.PERF brandy.GEN2
She poured brandy into glasses and then he drank some (of that) brandy.
[awkward continuation; cf. (35b)]

(c. * On vypil čaju, [PROi gorrjačim].
he drank.PERF tea.GEN2 hot.INSTR
intended: He drank some tea hot.
2.2.1. Against the Positional Alternative

Let us now consider a Positional Alternative to the Small Nominal Hypothesis. This Positional Alternative for objects is adopted from Kallulli’s (1999) proposal for bare singulars in Norwegian (discussed below in section 3). According to this Positional Alternative, objects of verbs with the cumulative *na-* are merged at the bottom of the tree (i.e., inside the VP), crucially, in a complement position; in contrast, other (DP) objects are merged in specifier positions.

(44)  Positional Alternative – Objects
a. OBJECTS W/CUMULATIVE *na-*  b. OTHER OBJECTS

\[
\begin{array}{c}
\text{VP} \\
\text{VP} \\
\text{V°} \quad \text{XP} \\
*na- \quad \text{OBJ}
\end{array}
\]

In what follows, I argue that the Positional Alternative fails to account for a number of observed facts. The argument consists of two parts: first, I show that objects in sentences with the cumulative *na-* are selected by the prefix itself rather than the stem. Therefore, the object must be merged in the projection of the prefix, which reduces the question of where the object is merged to the question of where the prefix itself is merged. Second, I show that the prefix is merged outside the VP in the functional domain. This rules out the structure in (44a) in favor of the structure schematized in (45) where the object is merged outside the VP in a specifier of a functional projection that hosts the cumulative prefix *na*.

Finally, like objects of the cumulative *na-* partitive objects are licensed by a perfective prefix; compare (i) with (iii):

(iii) * On pil konjaku.

\[he \ \text{drink.IMPF} \ \text{brandy.GEN2}\]

intended: He was drinking some brandy.

I leave a more detailed analysis of partitive objects for future research.

30 This may seem counterintuitive at first since the verbal stem may impose selectional restrictions on the object:

(i) a. On napilsja vody / *gruš.

\[he \ \text{cum-drink-SJA} \ \text{water.GEN} / *\text{pears.GEN}\]

He drank water to his heart’s content.

b. On naelsja gruš / *vody.

\[he \ \text{cum-drink-SJA} \ \text{pears.GEN} / *\text{water.GEN}\]

He ate pears to his heart’s content.

However, this is akin to the selection of the external argument: even though the external argument is selected by *v°* (see Kratzer 1996), the *v°* itself imposes a selectional restriction on it (e.g., the external argument of murder must be human, but the external argument of kill does not). Another way to analyze the multi-layered selection of the object by verbs with the cumulative *na-* is along the lines of a multi-attachment (and multi-selection) analysis in Svenonius (2004).
Let us turn to the first part of the argument: I maintain that the cumulative prefix na- alone is responsible for selection of the object. There are two pieces of evidence in support of this claim. First, the presence of the cumulative prefix na- makes the object obligatory even when the bare stem does not impose such restrictions, as with optionally transitive kopat ‘dig’ or an unergative letat ‘fly’.

Second, the cumulative prefix na- imposes its own selectional restrictions on the object (as suggested in Filip 1992; Babko-Malaya 1999, p. 52): the object must be a mass noun, such as kartoška ‘potato’, or a plural noun, such as tranšei ‘trenches’, but not a singular count noun, such as jama ‘pit’. As shown in (47b-c), no such restriction exists with bare stems or with stems containing other prefixes.

The only way to get singular nouns which are normally count (i.e., can combine with numerals on the non-kind interpretation, e.g., dva ugrja ‘two eels’) as objects of the cumulative na- is by putting them through the so-called ‘universal grinder’ (discussed most recently by Borer 2004). Hence, marinovannogo ugrja ‘pickled eel.GEN’ is interpreted as pickled-eel-stuff, not necessarily whole fish; krolka ‘rabbit.GEN’ is acceptable only for those speakers who can use this noun for rabbit-meat as opposed whole rabbits (and unacceptable for other speakers who use exclusively krol čatina for ‘rabbit-meat’); finally, raba ‘slave.GEN’ is unacceptable here (except on the ghastly interpretation we shall not contemplate here).
To summarize, the evidence concerning the obligatoriness of the object and selectional restrictions supports my claim that the cumulative na- itself selects the object.

Next, I argue that the cumulative prefix na- is merged outside the VP. Following Babko-Malaya (1999, p. 76), I distinguish between lexical prefixes (which are merged low in the tree, either inside the VP or just above it) and superlexical prefixes (which attach higher, outside the VP).31 The cumulative na- falls into the second category, as shown by the following three pieces of evidence, all involving different types of derivational morphology. First, the cumulative na- always appears outside the lexical prefixes, such as iz- ‘out.of’ (which in this example forms an idiomatic combination with the root), suggesting that na- is merged higher than lexical prefixes.

(49) na- pere- iz- birat’ senatorov  
CUM- RE- out.of- take senators.GEN  
to re-elect many senators

The second piece of evidence concerns secondary imperfective suffixes (henceforth IMPF2), which can attach to perfective stems only (therefore, *kapvyat’ ‘to drip.IMPF’), but among perfective stems the IMPF2 can attach only to perfective verbs with lexical prefixes. Crucially, it cannot attach to perfective stems containing superlexical prefixes.

(50) a. kapat’ – zakapat’ – zakapvyat’  
drip.IMPF  into-drip.PERF  into-drip.IMPF2  
to drip  to drip into  to be dripping into  
LEXICAL PREFIX
b. kapat’ – zakapat’ – * zakapvyat’  
drip.IMPF  INCEP-drip.PERF  in-drip.IMPF2  
to drip  to start dripping intended: to be starting to drip  
SUPERLEXICAL PREFIX

In this respect, the cumulative na- patterns with superlexical prefixes: it does not allow the attachment of the IMPF2:

(51) a. Babushka nakapala kapel’ na saxar.  
grandmother CUM-dripped drops.GEN on sugar  
The grandmother dripped drops on (a piece of) sugar.

b. *Babushka nakapyvala kapel’ na saxar.  
grandmother CUM-dripped.IMPF2 drops.GEN on sugar  
intended: The grandmother was dripping drops on (a piece of) sugar.

How does this show that superlexical prefixes attach higher than the IMPF2? Since the IMPF2 cannot attach to an imperfective root like kap- (see the imperfective kapat’ ‘to drip’ in (50)), it must attach after a perfectivizing prefix is attached. In the case of a lexical prefix (see (50a)), the prefix attaches first, making the stem perfective, and then the IMPF2 attaches making the stem imperfective again. If the functional head hosting the superlexical prefix – as in (50b) or (51b) – were merged below the head hosting the IMPF2, we would expect the IMPF2 to be able to attach to a perfective stem containing such a prefix as well. However, this is not the case; hence, we must deduce that the functional head hosting the superlexical prefix is merged higher than the one hosting IMPF2. Once the superlexical prefix has been merged, IMPF2 cannot be ‘tucked in’ underneath it.

The third piece of evidence concerns the formation of deverbal nouns in -nie/-tie. As shown in Pazelskaya and Tatevosov (2003), such nouns can be formed from simplex stems (e.g., dele-nie ‘division’), stems containing lexical prefixes (e.g., iz-bra-nie ‘election’), or stems containing a lexical prefix and a secondary imperfective suffix (e.g., ras-pil-iva-nie ‘sawing’), but not from stems with superlexical prefixes (e.g., with a delimitative po-: *po-pisa-nie ‘writing for a while’; Pazelskaya and Tatevosov call them ‘external prefixes’). In this respect, the cumulative na- again patterns with superlexical prefixes in not allowing the nominalization:

31 For purposes of exposition, I ignore purely perfectivizing prefixes (such as na- in (35e) or s- in (25a) above), which pattern with lexical prefixes with respect to the tests discussed in the main text.
Small Nominals

(52) a. sobirat’ marki sobira- nie marok
    collect stamps.ACC collect-NL stamps.GEN
to collect stamps collecting stamps

b. na- sobirat’ marok * na- sobira- nie marok.GEN
    CUM-collect stamps.GEN CUM-collect-NL stamps.GEN
to collect a lot of stamps intended: collecting a lot of stamps

Thus, we can postulate the following (partial) hierarchy of syntactic heads hosting the relevant derivational morphology (arrows indicating descending hierarchy):

(53) na- → nominalization morpheme → secondary imperfective → [lexical prefix + root]

Since nominalization morphemes and secondary imperfective suffixes attach closer to the root than the cumulative na-, they cannot attach to stems containing the cumulative prefix. Given that the cumulative na- is merged outside the VP, its argument(s) must be likewise merged outside the VP. Therefore, the object of the cumulative na- cannot be merged in the complement position at the very bottom of the tree, as in (44a). Thus, the Positional Alternative is once again untenable.

To recapitulate, I have shown that the cumulative prefix na- selects a Small Nominal as its argument. Like other Small Nominals, such Small Nominal objects receive a non-referential interpretation and cannot serve as controllers or antecedents of reciprocals. Additionally, Small Nominal arguments of the cumulative na- pattern with other Small Nominals in that they can undergo Approximative Inversion. Finally, I have argued against the Positional Alternative which takes the objects of the cumulative na- to be merged in a different type of syntactic position compared to other objects, a complement rather than a specifier position. In the next section, I turn to Small Nominals in other languages.

3. Small Nominals in Other Languages

The aim of this section is to show that Small Nominals are found even in argument positions more widely than has been previously assumed. Note, however, that this is not a comprehensive cross-linguistic catalog of Small Nominals, just an indicative survey.

3.1. Bare Singulars in Norwegian

One obvious candidate for the status of a Small Nominal are bare singulars in languages like Norwegian (discussed in Kallulli 1999; Borthen 2003; Julien, forthcoming). Unlike in English, in these languages a singular count noun can appear without an article, as in the following attested Norwegian example cited in Borthen (2003, p. 356):

(54) Jeg bruker ikke nakent nomen.
    I use not naked nominal
I don’t use bare nominals.

In what follows, I will illustrate the relevant properties of bare singulars using (Bokmål) Norwegian examples. The first thing to note is that these bare singulars appear without D-level elements, such as articles (although Norwegian has overt articles); bare singulars do not allow Q-level elements, such as numerals, either (Julien, forthcoming, p. 304). Thus, as assumed in Kallulli (1999), we can consider bare singulars as NPs, a (smaller) type of Small Nominals. Like Small Nominals in Russian considered in the previous section, Norwegian bare singulars behave as non-referential expressions. The relevant tests are summarized in Table 4.

---

32 Other languages mentioned in the literature as having bare singulars are Albanian, Greek, German, Dutch (Kallulli 1999), and Brazilian Portuguese (Schmitt and Munn 2004). In addition, Engelhardt (2002) argues that tough-nominals in Hebrew (e.g., ha-šūtid kaše le-xīṣūf lit. ‘the future is difficult for prediction’) are bare NPs, that is, Small Nominals in the terminology of this paper. A detailed analysis of these languages cannot be undertaken here because of space limitations.
Table 4. Bare singulars vs. (in)definite DPs in Norwegian

<table>
<thead>
<tr>
<th>contrast</th>
<th>bare singulars</th>
<th>(in)definite DPs</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>specific interpretation</td>
<td>*</td>
<td>✓</td>
<td>(55)</td>
</tr>
<tr>
<td>partitive interpretation</td>
<td>*</td>
<td>✓</td>
<td>(56)</td>
</tr>
<tr>
<td>non-isomorphic wide scope</td>
<td>*</td>
<td>✓</td>
<td>(57)-(59)</td>
</tr>
<tr>
<td>controller of PRO</td>
<td>*</td>
<td>✓</td>
<td>(60b), (61a)</td>
</tr>
<tr>
<td>antecedent in anaphor binding</td>
<td>*</td>
<td>✓</td>
<td>(60c), (61b)</td>
</tr>
<tr>
<td>agreement on predicate</td>
<td>*</td>
<td>✓</td>
<td>(62)</td>
</tr>
<tr>
<td>pronominal elements</td>
<td>det ‘that.NEUT’</td>
<td>*</td>
<td>(63)</td>
</tr>
<tr>
<td></td>
<td>den ‘it.MASC’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

First, bare singulars are incompatible with adjectives denoting specificity, such as *spesifikk* ‘specific’, *bestemt* ‘certain’, and *viss* ‘certain’. Indefinite DPs can, of course, be specific and are compatible with these adjectives (as mentioned in Borthen 2003, pp. 27-28).

(55)  a. Jeg hadde på meg [DP en viss gul skjorte i går].
I had on me a certain yellow shirt in yesterday
I wore a certain yellow shirt yesterday.

    b.*Jeg hadde på meg [NP viss gul skjorte i går].
I had on me certain yellow shirt in yesterday
intended: I wore a certain yellow shirt yesterday.

Second, bare singulars (unlike indefinite DPs) cannot have a partitive interpretation, referring back to a subset of a previously introduced set (as noted in Borthen 2003, pp. 29-30):

(56)  a. Det var igjen mange sykler etter salget,
it was left many bikes after sale.DEF,
There were many bikes left after the sale,

    b. …så jeg ga [DP én sykkel] til Kari.
so I gave one bike to Kari
…so I gave one of the bikes to Kari.

    c.#…så jeg ga [NP sykkel] til Kari.
so I gave bike to Kari
…so I gave Kari a bike (any bike).

Third, in contrast with DPs, bare singulars cannot take non-isomorphic wide scope and do not lead to scopal ambiguities (examples in (57) from Borthen 2003, pp. 24-25, example in (58) from Kallulli 1999, pp. 121-122, and example in (59) from Kaja Borthen, personal communication).

(57)  a. Alle barna prøvde [DP en jakke].
all children.DEF tried a jacket
All the children tried on a jacket. (ambiguous)

    b. Alle barna prøvde [NP jakke].
all children.DEF tried jacket
All the children tried on some jacket or other. (narrow scope only)

(58)  Jeg ønsker ikke sykkel.
I want not bike
It is not the case that I want a bike. NOT: There is a bike that I don’t want.

(59)  Mange barn prøvde jakke.
many children tried jacket
Many kids tried on some jacket or other. NOT: There’s a jacket that many kids ...
Furthermore, as can be seen from the data below, bare singulars cannot be controllers of PRO or antecedents of reflexives. Since, bare singulars are acceptable only when they can be conceptualized as part of a “conventionalized situation type” (I return to this point below), these examples are set in a context of a competition consisting of a number of tasks, as in a reality TV show; (60a) is a control sentence to make sure that speakers accept bare singulars in this context.

(60) a. Den første oppgåven var å mate [NP krokodille].
the first task.DEF was to feed crocodile
The first task was to feed a crocodile.

b.*Den andre oppgåven var å vaske [NP sykkel], [PRO, ren].
the second task.DEF was to wash bike clean
intended: The second task was to wash a bike clean.

c.*Den tredje oppgåven var å sette [NP papegøye], på pinnen sin.
the third task.DEF was to put parrot on perch.DEF 3.REFL.POSS
intended: The third task was to place a parrot on its perch.

As the following examples show, DPs (both indefinite and definite) are perfectly acceptable as controllers of PRO or antecedents of reflexives in Norwegian:

(61) a. Den andre oppgåven var å vaske {[DP en sykkel], [DP sykkelen],} [PRO, ren].
the second task.DEF was to wash a bike bike.DEF clean
The second task was to wash {a/the} bike clean.

b. Den tredje oppgåven var å sette {[DP en papegøye], [DP papegøyen],}
the third task.DEF was to put a parrot parrot.DEF
på pinnen sin.
on perch.DEF 3.REFL.POSS
The third task was to place {a/the} parrot on its perch.

Finally, bare singulars in Norwegian contrast with indefinite (and definite) DPs and pattern with Small Nominals, in particular with QP subjects in Russian, discussed in section 2.1.1 above, in that they do not trigger agreement on the predicate. The relevant contrast from Borthen (2003, pp. 67, 184) is given below: the bare singular bil ‘car’ (masculine) does not trigger agreement on the predicate, which appears in the default neuter; in contrast, the definite DP bilen ‘the car’ and the indefinite DP en bil ‘a car’ trigger masculine agreement on the predicate and cannot appear with the default neuter. (For a further discussion of agreement facts involving bare singulars in Norwegian, see Faarlund 1977; Hellan 1986). 33

(62) a. [NP Bil] er kjekt / *kjekk å ha.
car(MASC) is handy.NEUT / *handy.MASC to have
A car is handy to have.

b. [DP Bilen] er kjekk / *kjekt å ha.
car(MASC).DEF is handy.MASC/ *handy.NEUT to have
The car is handy to have.

c. [DP En bil] er kjekk / *kjekt å ha.
a car(MASC) is handy.MASC/ *handy.NEUT to have
A car is handy to have.

33 Here and below, I gloss the gender of forms like kjekk ‘handy’ as masculine (assuming for the ease of exposition a syncretism between masculine and feminine agreement forms). The more usual gloss would be as ‘common gender’, a term potentially misleading here since in the Norwegian grammatical tradition ‘common gender’ refers to an adjectival or article form that agrees with both masculine and feminine nouns, whereas in the Russian grammatical tradition the same term refers to grammatically feminine nouns that can refer to both males and females (e.g., sirota ‘orphan’, plaksa ‘cry-baby’, etc.).
Note that it is impossible to analyze bare singulars as syntactically incorporated into the verb (contra Kiefer 1994; Asudeh and Mikkelsen 2000), since they need not appear adjacent to the verb and can be topicalized. But as noted in Borthen (2003, pp. 46-48), only the pronominal element *det ‘that.NEUT’ can replace the bare singular. In contrast, DPs must be replaced by *den ‘it.MASC’ (I return to incorporated Small Nominals in section 3.4 below):34

(63)  

dress(MASC), that.NEUT need you not
A dress, that you don’t need.
that dress(MASC)-DEFSUFF, it.MASC need you not
That dress, you don't need it.

3.2. Small PPs in Germanic and Romance

Admittedly, in many other languages Small Nominals are more limited than in Norwegian or Russian. But they are nevertheless found in languages like English, German, French, Spanish, and (Standard) Italian, in particular in what McIntyre (2001) calls ‘Small PPs’, illustrated below with representative examples:35

(64)  

a. ENGLISH:
Scott went **to jail** for killing his wife, and his lawyer went **to *(the) jail** to visit him.
b. GERMAN:
Er bezahlte die Ware **mit Kreditkarte**.
he paid-for the product with credit-card
He paid for the product by credit card.
Er wies sich aus **mit *(einer) Kreditkarte**.
he identified-himself with a credit-card
He identified himself with a credit card.
c. FRENCH:
Il **est en prison** pour ses terribles crimes.
he is in prison for his terrible crimes
He is in prison for his terrible crimes.
Il **est dans *(la) prison** pour visiter sa femme la tueuse.
he is in the prison for to-visit his wife the murderess
He is in the prison to visit his murderess-wife.
d. ITALIAN
Gianni è **in prigione**. vs. Gianni è **alla prigione**.
Gianni is in prison Gianni is in-the prison
Gianni is in prison (as an inmate). Gianni is in the prison (as a visitor).

34 Note that Small Nominals in Russian, such as QPs undergoing Approximative Inversion, can be topicalized only if no referential pronoun is used (cf. Yadroff and Billings 1998, p. 323), see also discussion surrounding (15) and (30) in the main text above:

(i) Čelovek pjat’, my ešče ne videli (*ix).
people five we still not saw them
As for a group of approximately five people, we haven’t seen such a group yet.

35 German examples are from McIntyre (2001); Norwegian examples are from Borthen (2003). I thank Stephane Goyette for discussing the French examples, Nerea Madariaga for the Spanish examples, and Andrea Moro for the Italian examples.
e. SPANISH

Está en prisión por sus terribles crímenes.

He is in prison for his terrible crimes.

Está en la prisión para vistar a su mujer-asesina.

He is in the prison to visit his murderess-wife.

f. NORWEGIAN

Han ringte fra telefonkiosk. vs. Han hoppet fra *(en) telefonkiosk.

he called from telephone-booth he jumped from a phone booth.

One noteworthy fact is that in some cases the complement of a preposition is not only allowed to be a Small Nominal – it is specifically selected by the preposition as a Small Nominal (another head that specifically selects a Small Nominal as a complement is the Russian cumulative prefix na-, discussed in detail in section 2.2 above). For example, the French preposition en ‘in’ – as opposed to dans ‘in’ – selects exclusively a Small Nominal complement; compare (64c) with (65):

(65) * Il est en la prison.

he is in the prison
intended: He is in the prison.

Another interesting generalization, noted by McIntyre (2001) and illustrated in (64), is that Small PPs (or rather Small Nominal complements of prepositions) are restricted to a ‘conventionalized interpretation’. Thus, if one is in prison in English, en prison in French, en prisión in Spanish, or in prigione in Italian, one is there as an inmate, not as a visitor. Thus, Small Nominals (specifically, bare NPs) which are complements to a preposition are like bare NPs in other argument positions (e.g., in Norwegian) in that they lack their own reference; hence, their meaning cannot be extended beyond the canonical one. This appears to be a characteristic property of bare NPs.

3.3. Small PPs in Russian

One obvious question at this point is whether Russian has Small PPs as well. Since Russian does not have overt articles, it is harder to detect such PPs in this language. However, I propose here that there is at least one construction in Russian involving a Small PP, illustrated below (unless otherwise indicated, all grammatical examples of this construction below have been found on the Russian internet using the Yandex search engine).

(66) Putin soglasen ballotirovat’sja v presidenty.

Putin.NOM agrees to-run into presidents.‘NOM’

Putin agrees to run for president.

The peculiarity of this construction is in the apparent use of the preposition v ‘into’ with a nominative form of the noun (glossed here as ‘NOM’ in quotation marks for reasons to become apparent immediately below). This is odd because prepositions in Russian do not normally select nominative case; in its other uses v ‘in, to, into’ selects either the prepositional case, as in v karmane ‘in a/the pocket’, or the accusative case, as in v karman ‘into a/the pocket’.36 Note that the same form is used regardless of the form of the putative ‘antecedent’: it can be (i) nominative, as Putin in (66) above, (ii) accusative, as Putina in (67a) below, (iii) dative, as in (67b), or any other case form.

(67) a. Gruppa graždan vydvinula Putina v presidenty.

group.NOM citizens.GEN nominated Putin. ACC into presidents. ‘NOM’

A group of citizens nominated Putin for president.

36 Other prepositions may select the genitive (e.g., dlja karmana ‘for a/the pocket’), the dative (e.g., po karmanu ‘on a/the pocket’), or the instrumental (e.g., s karmanom ‘with a/the pocket’), but never the nominative.
b. Vašemu sobesedniku put’ v lingvisty zakazan.

For your interlocutor the way into linguistics is closed.

Furthermore, this construction is very productive and is found with a variety of nouns, some of which have been very recently borrowed (my internet search returned among others such examples as v trejdery ‘into traders’, v xakery ‘into computer hackers’, and even v dansery ‘into dancers’); some other examples are given in (68) below.

(68) a. Èj, brjunety-molodcy, zapišites’-ka v otcy.

Hey brunets-chaps come-and-sign-up into fathers.'NOM’

Hey, dark-haired chaps, sign up to be fathers. (from an advert for sperm-donors)

b. Mužčinam nravjatsja ženčiny, ne nabivajuščiesja k nim v žény.

Men like women who do not insist on becoming their wives.

c. A vy, druzja, kak ni sadites’, vsë v muzykanty ne godites’!

And you, friends, however you sit, will not be musicians anyway! [Krylov, “Kvartet’]

d. Kto xodit v gosti po utram tot postupaet mudro.

He who goes out on a visit in the morning acts wisely. [Zaxoder, Winnie-the-Pooh]

e. Začem mne sčitat’šja španoj i banditom, ne l’čše l’ podat’sja mne v antisemity?

What for should I be considered some riff-raff and a thug, isn’t it better QU become to-me into anti-Semites.’NOM’

What for should I be considered some riff-raff and a thug, isn’t it better to become an anti-Semite? [Vysotsjij, “Antisemity”, 1963]

Note that the complement of v ‘into’ need not consist of one word, as in the above examples; it may contain complements and some modifiers, but as shown below, not just anything goes either (see (70) below).

(69) a. Toni Adams metit v kapitany sbornoj Anglii.

Tony Adams aims to become the captain of England’s national team.

b. Terminator sobralsja v kalifornijskie gubernatory.

The Terminator prepared to run for the California governor.

From this I conclude that this is a productive construction rather than a handful of idioms. So why does the complement of v ‘into’ appear in what seems to be a nominative form? Here, I propose (following a suggestion in Franks and Pereltsvaig 2004) that the complement of v ‘into’ is not actually nominative (hence it is glossed as ‘NOM’, with quotes), but rather inanimate accusative (which is syncretic with the animate nominative). Although the nouns that can be used in this construction are

---

37 This word apparently traces back to the title of the 2000 French film “The Dancer” (by Fred Garson) released in Russia as “Danser”.

38 This treatment of the apparent nominative form as inanimate accusative is further supported by the fact that in Old Russian the form of the noun in this construction was distinctly accusative before the animate plural accusative form became syncretic with the genitive (see Švedova 1982, p. 445). I thank James Lavine for bringing this to my attention.
normally animate, when used in this construction they do not denote human individuals but rather social categories like ‘president’, ‘father’, ‘wife’, ‘musician’, and so on.\textsuperscript{39}

Structurally, this lack of individual reference is related to the complement of \textit{v} ‘into’ being a bare NP lacking the DP projection; hence, these \textit{v}+NP structures are small PPs. This analysis is strongly supported by the fact that the complement of \textit{v} ‘into’ in this construction cannot contain any D-level elements, as in (70a), nor can it contain a modifier that cannot be construed as part of a social construct, as in (70b); the latter are not, strictly speaking, ungrammatical, but semantically or pragmatically odd, which is marked here and below with #.

\begin{enumerate}[label=(\arabic*)]
\item On rešil ballotirovat’*sjja v ēti presidenty.
\hspace{2cm}he.NOM decided to-run into these presidents.‘NOM’
\hspace{2cm}intended: \textit{??}He decided to run for president in this election.
\item On rešil ballotirovat’*sjja v dostojnye gubernatory.
\hspace{2cm}he.NOM decided to-run into worthy governors.‘NOM’
\hspace{2cm}intended: \textit{??}He decided to run for a worthy governor.
\end{enumerate}

Furthermore, like other Small Nominals, the complement of \textit{v} ‘into’ in this construction cannot take wide scope with respect to a universal quantifier (which is possible when an animate accusative form appears as the complement of \textit{v} ‘into’); thus, (71a) is unambiguous, whereas (71b) is ambiguous between the wide and the narrow scope readings for \textit{generalov} ‘generals’:

\begin{enumerate}[label=(\arabic*)]
\item Vsjakij soldat dolžen metit’ v generaly.
\hspace{2cm}every.NOM soldier.NOM must aim into generals.‘NOM’
\hspace{2cm}Every soldier must aim to become a general.
\item Vsjakij soldat dolžen metit’ v generalov.
\hspace{2cm}every.NOM soldier.NOM must aim into generals.ACC(animate)
\hspace{2cm}Every soldier must aim to shoot {the/some} generals.
\end{enumerate}

In sum, the Small Nominal analysis accounts for the mysterious case pattern found in this construction, as well as for the ‘conventionalized interpretation’ restriction on the nouns that can appear there.\textsuperscript{40}

\subsection*{3.4. Denominal Verbs as Small PPs}

Although, as mentioned above, I do not think that a syntactic incorporation analysis is applicable to the cases of Small Nominals discussed so far, there is another configuration where Small Nominals are indeed syntactically incorporated: denominal verbs of the ‘shelve’/‘saddle’- type. As has been proposed by Hale and Keyser (1993) and in their later work, such verbs are formed via incorporation of a noun into a null preposition, which then incorporates into a null verb, as schematized below:

\begin{enumerate}[label=\textit{(\alph*)}]
\item My šli lesom.
\hspace{2cm}we walked forest.INSTR
\hspace{2cm}We walked through a forest.
\item My prieëali poezdom.
\hspace{2cm}we arrived train.INSTR
\hspace{2cm}We arrived by train.
\end{enumerate}

\textsuperscript{39} According to Zolotova (1988, pp. 170-172), this construction expresses “a characteristic of an individual according to his belonging to a category, a group of people, usually a socially meaningful one” (translation – mine).

\textsuperscript{40} Another possible candidate for a bare NP in Russian, suggested to me by Yakov Testelets (personal communication) is the nominal adjuncts, such as the instrumental of path, as in (i), and transportation, as in (ii). I leave these examples to further research.
Crucially for our purposes, such incorporation cannot take place out of a DP, as the D° would block such incorporation (for a more recent analysis of ‘shelve’/‘saddle’-type verbs in terms of incorporation see Pereltsvaig 2003 and Harley 2004). Note also that these incorporating Small Nominals (i.e., bare NPs) – like their non-incorporating counterparts discussed above – are limited to the ‘conventionalized interpretation’ (as noted originally by Kiparsky 1997, but also by Fodor and Lepore 1999 and Higginbotham 2000). For example, Kiparsky points out that although Joseph and Mary can be said to have stabled their donkey or put the infant Jesus in a stable, the sentence #Joseph and Mary stabled the infant Jesus is decidedly odd or even unacceptable. This is so, according to Kiparsky, because stables are for housing (certain kinds of) animals but not human infants. In much the same vein, one can clothe a child, but not a washing line; one can hospitalize a patient, but not a nurse (unless she is a patient herself); one can butter the toast and pepper the steak, but dropping some butter or pepper on the floor cannot be expressed by #butter the floor or #pepper the floor. Interestingly, the same ‘conventionalized interpretation’ restriction applies to incorporating Small Nominals in other languages as well, such French, Russian, and Hebrew.

(73)  

<table>
<thead>
<tr>
<th>a. FRENCH:</th>
<th>b. HEBREW</th>
</tr>
</thead>
<tbody>
<tr>
<td>poivrer {le ragoût / # le plancher}</td>
<td>himliax {‘et ha-marak / # ‘et ha-ricpa}</td>
</tr>
<tr>
<td>pepper the stew / the floor</td>
<td>salted ACC the-soup / ACC the-floor</td>
</tr>
<tr>
<td>pepper the stew, NOT: to sprinkle pepper on the floor</td>
<td>He salted the soup, NOT: He sprinkled salt on the floor.</td>
</tr>
<tr>
<td>c. RUSSIAN</td>
<td></td>
</tr>
<tr>
<td>solit’ {griby / #banku}</td>
<td>to-salt mushrooms / jar</td>
</tr>
<tr>
<td>to crown (the) mushrooms, NOT: to place salt in a jar</td>
<td></td>
</tr>
</tbody>
</table>

To summarize, in this section I have considered several examples of Small Nominals from a variety of languages. These examples show that Small Nominals are more widely spread than has been previously assumed. In all these cases, Small Nominals exhibit the same properties: they are non-referential semantically, they fail to trigger agreement on the predicate and cannot serve as controllers of PRO or antecedents of reflexives. Besides, I have shown that although many cases of Small Nominals do not involve syntactic incorporation, there is a construction, namely denominal verbs, which can be (and in fact, has been) analyzed as involving what can be labeled Small Nominals incorporating into a null preposition. Finally, I have shown that bare NPs in a number of different constructions across languages are subject to a ‘conventionalized interpretation’ restriction because of their non-referential nature.
4. Analysis

In the previous sections, I have argued for the Small Nominal hypothesis, namely that arguments selected by heads need not be projected fully as DPs, but can be what I have called Small Nominals, such as QPs or bare NPs, contra the claims of Longobardi (1994) and subsequent literature. Furthermore, I have shown that although such nominals appear in the same syntactic position as their DP counterparts, the two types of nominals exhibit a cluster of properties which distinguish them from each other. Thus, Small Nominals receive a non-referential (i.e., non-individuated) interpretation, they can receive neither specific nor partitive interpretation, they cannot serve as controllers of PRO or antecedents of reflexives/reciprocals, and do not trigger agreement on the predicate. In this section, I propose an analysis that accounts for both the existence of Small Nominal arguments and their special properties.

4.1. Proposal: $\phi$-features as the locus of referentiality

The gist of the proposal is to tease apart two concepts previously associated with referentiality: the criterion of identity, which “sets standards by which one can judge whether two things are the same or not” (Baker 2003a, p. 101), and the ability to pick out an individual referent. Syntactically, these two semantic concepts are represented through a distinction between a set of unvalued $\phi$-features and a set of fully valued $\phi$-features. Following Baker’s (2003a) idea that nouns possess a referential index, I assume that a noun possesses a set of $\phi$-features. However, I depart from Baker in proposing that the $\phi$-features of a noun are unvalued. It is the D° which values the $\phi$-features, so that only at the level of DP are the $\phi$-features fully valued. Small Nominals have unvalued $\phi$-features (corresponding to the criterion of identity in Baker’s system). Thus, the representation of $\phi$-features looks as follows:

(74) a. DPs b. Small Nominals

\[
\begin{array}{l}
[\phi\text{- gender: } FEM] \\
[\phi\text{- number: } SG] \\
[\phi\text{- person: } 3] \\
[\text{gram. gender: MASC}] \\
[\text{gram. number: } SG]
\end{array}
\]

\[
\begin{array}{l}
[\phi\text{- gender: } ____] \\
[\phi\text{- number: } ____] \\
[\phi\text{- person: } ____] \\
[\text{gram. gender: } ____] \\
[\text{gram. number: } ____]
\end{array}
\]

Note further that the gender and number features of Small Nominals in (74b) are not the grammatical gender and number features associated with the noun. The latter features have to be specified independently. Thus, the more complete representation of feature matrices looks as follows:

(75) a. DPs b. Small Nominals

\[
\begin{array}{l}
[\phi\text{- gender: } FEM] \\
[\phi\text{- number: } SG] \\
[\phi\text{- person: } 3] \\
[\text{gram. gender: } MASC] \\
[\text{gram. number: } SG]
\end{array}
\]

\[
\begin{array}{l}
[\phi\text{- gender: } ____] \\
[\phi\text{- number: } ____] \\
[\phi\text{- person: } ____] \\
[\text{gram. gender: } MASC] \\
[\text{gram. number: } SG]
\end{array}
\]

Such doubling of gender and number features may seem redundant at the first glance. However, it is independently necessary in order to account for the discrepancies between agreement internal to a nominal (such as attributive agreement), which I propose to analyze as matching of grammatical gender and number features, and agreement external to a nominal (such as predicate agreement), which I propose to analyze as matching the fully valued $\phi$-features. Although typically the two types of agreement coincide, there are cases where they are distinct.

One such case where internal agreement and external agreement do not coincide involves the so-called ‘masculine nouns referring to females’ and ‘nouns of common gender’ in Russian (see Pereltsvaig 2000b). Such nouns trigger agreement in grammatical gender on attributive adjectives but agreement in $\phi$-gender on predicates. Interestingly, such discordant instances of agreement can occur even within the same sentence, as illustrated below with attested examples involving brigadir ‘foreman’ and skul’ptor ‘sculptor’, which are grammatically masculine but refer to females in these cases, and kinozvezda ‘movie star’, which is grammatically feminine but refers to a male here.
(76) a. ... naš brigadir naxodilas' v dekretnom otpuske.
   our.MASC foreman(MASC) was.FEM in maternity leave
   Our foreman was on maternity leave. [“Komsomols’kaya Pravda”, 17 Feb. 1962]

b. V sentjabre 1920 goda v Moskve pobyvala anglijskij skulptor,
in September 1920 year in Moscow visited.FEM English.MASC sculptor(MASC)
plemjannica Čerčilja Klèr Šeriden.
niece Churchill Claire Sheridan
   In September 1920 the English sculptor, Churchill’s niece Claire Sheridan visited Moscow.
   [“Izvestija”, 19 March 1961]

c. Filippinskaia kinozvezda Fernando Po mladšij ... official'no zajavil...
   Philippine.FEM star(FEM) Fernando Po younger.MASC officially declared.MASC
   The Philippine movie star Fernando Po, Jr. ... officially declared...

   Another construction where a distinction between grammatical and φ-number appears to be
   needed is the coordinate noun phrases of the type this boy and girl, examined by King and Dalrymple
   (2004). They show that a distinction between two types of agreement features – their CONCORD and
   INDEX features, roughly corresponding to my grammatical and φ-features – is necessary to account for
   the forms of the determiner in such coordinate nominals in a number of languages (they investigate
   English, Brazilian Portuguese, German, Finnish, Hindi/Urdu, Russian, Georgian, and Armenian).

   More importantly for our present purposes, such doubling of agreement features is necessary
   to account for the agreement patterns involving Small Nominals in languages like Russian and
   Norwegian. In both of these languages Small Nominals exhibit agreement in grammatical gender and
   number internally to the nominal and default agreement (i.e., 3rd person neuter) on the predicate.
   Recall from section 2.1.1 that Small Nominal subjects in Russian do not trigger agreement on the
   predicate. Note, however, that an attributive adjective (here, velikix ‘great.GEN.PL’) agrees with the
   noun in case and number (there is no visible gender agreement here since plurals in Russian do not
   distinguish genders).

41 As has been pointed out to me by Gil Rappaport, such “schizophrenic” agreement pattern is not the only one
possible for such nouns. He suggests the following paradigm:

   (i) a) Naš vrač prišla. our.MASC doctor came.FEM [same as (77a-b)]
   b) Naš vrač prišel. our.MASC doctor came.MASC
   c) Naša vrač prišla. our.FEM doctor came.FEM
   d) * Naša vrač prišel. our.FEM doctor came.MASC

   However, the patterns in (ib) and (c) are statistically very rare. Thus, Graudina et al. (1976, pp. 96-101) indicate
   that masculine agreement on the predicate – as in (ib) – is found only in 4.57% of all tokens. The pattern in (ic)
   with feminine agreement on attributive adjectives is found more often, in 30.95% of all tokens, but limited
   largely to colloquial speech and is possible only in the nominative (e.g., u izvestnogo kompozitora Paxmutovoj
   ‘at the famous.MASC composer.GEN Pakhmutova’, *u izvestnoj kompozitora Paxmutovoj ‘at the famous.FEM
   composer.GEN Pakhmutova’). Furthermore, most of my consultants (including myself) judged patterns in (ib-c)
   as unacceptable or at least marginal. Therefore, the paradigm in (i) must be amended as follows:

   (ii) a) Naš vrač prišla. our.MASC doctor came.FEM [same as (77a-b)]
   b) ?? Naš vrač prišel. our.MASC doctor came.MASC
   c) ?? Naša vrač prišla. our.FEM doctor came.FEM
   d) * Naša vrač prišel. our.FEM doctor came.MASC

   See Pereltsvaig (2000b) for a further discussion of internal vs. external agreement and Pereltsvaig (2001, section
   4.2.2.1) for a further discussion of discrepancies in gender of the subject and predicate in copular sentences.
In the Mariinsky Theater danced five famous ballerinas.

Gender agreement inside a Small Nominal is illustrated in the following example (John Bailyn, personal communication):

Yesterday danced {two male dancers / two ballerinas}.

Similarly, bare singulars in Norwegian trigger agreement in grammatical gender and number on an attributive adjective (fin ‘nice’ in the example below), whereas their predicates appear with the default neuter (singular) agreement (kult ‘cool’ in the example below); examples from Kaja Borthen (personal communication).

A car is cool.

These mismatches in agreement can be accounted for as follows: being Small Nominals, QP subjects in Russian and NP (i.e., bare singular) subjects in Norwegian lack the DP projection. Hence, they have grammatical gender and number specification which comes from the N°, but lack values for φ-gender and φ-number features. Therefore, they exhibit agreement in grammatical gender and grammatical number on the elements internal to the nominal (the QP or the NP), but fail to trigger agreement in φ-gender and φ-number on the predicate. In what follows, I focus on agreement on the predicate, which constitutes matching of fully valued φ-features of DP and ignore the agreement internal to the nominal (i.e., matching of the grammatical number and gender features of N°).

Going back to the distinction between unvalued φ-features of N° and a fully valued set of φ-features of DP, we can divide various phenomena previously related to the presence of a referential index into two categories: those that require a set of φ-features, whether valued or not, and those that require a fully valued set of φ-features. Thus, I propose that thematic relations belong to the former category: they require the presence of a set of φ-features, whether fully valued or not (or simply [+N] feature, which – following Baker (2003a) – I take to be a shorthand for ‘has a set of φ-features’). In contrast, control, agreement, and anaphor binding require a fully valued set of φ-features. It is the claim of this paper that the distinction between two types of ‘referentiality’ phenomena explains why Small Nominals can enter into thematic relations (and therefore occur in argument positions), but cannot enter into control, anaphor binding, and agreement relations.

This, of course, brings up the question of clausal arguments, both full CPs and Small Clauses. However, space limitations prevent me from giving this issue a sufficient consideration in this paper. I will note here only that divorcing agreement from argumenthood (i.e., thematic relations) opens a possibility of accounting for the contrast between polysynthetic and non-polysynthetic languages, noted in Baker (2003b): the former (e.g., Mapudungun, illustrated below), unlike the latter (e.g., English) do not allow clausal arguments. Polysynthetic languages are more restrictive than non-polysynthetic languages in that they require all (unincorporated) arguments to have an agreement reflex in the verbal complex; clauses, which cannot have such a reflex, are banned from argument positions:

(i) a. fey-pi-rke-e-y-ew ñi lamngen chunngechi ñi montu-n.
   that-say-REP-INV-3.SING-DS POSS sister how POSS escape-NL
   He was told by his sister how he escaped. (lit. ‘…how his escaping’)

   b.*fey-pi-rke-e-y-ew ñi lamngen chunngechi (fey)
   that-say-REP-INV-3.SING-DS POSS sister how he
   escape-REP-IND.3.SING
   intended: He was told by his sister how he escaped.
Note that my proposal goes against the accepted position that a phrase needs to be referential (or have a referential index) in order to be an argument, as has been explicitly claimed or implicitly assumed by Williams (1989), Longobardi (1994), Baker (2003a), and others. Williams (1989) goes even further by proposing that thematic relations are anaphoric in nature: “the theta-role assignment relation is a relation subject to binding theory, just as the antecedent-anaphor relation is” (p. 454). But as has been shown above, with Small Nominals thematic relations and binding patterns are quite distinct. Thus, I abandon Williams’ idea that thematic relations are to be subsumed under binding theory. Instead, I take anaphor binding (as well as control and agreement) to involve matching of reference between two nominals: the antecedent and the anaphor, the controller and the PRO, or the trigger and the agreeing predicate. This implies that both PRO and anaphors (reflexives and reciprocals) must have fully valued φ-features. In what follows, I will show that this is indeed so.

4.2. Control and φ-features

First, consider the claim that PRO must have fully valued φ-features. This claim is intended to explain why a Small Nomial lacking fully valued φ-features is not eligible to be a controller (its ungrammaticality as a controller has been established in sections 2 and 3 above). But what evidence, if any, is there to show that PRO indeed has fully valued φ-features? Here, I suggest testing the features of the ‘invisible’ PRO in Russian by using the so-called semipredicative odin ‘alone’. This test has been applied in the literature to show that Russian PRO is marked with dative case (see Franks 1995 and the references cited therein for discussion). We can apply this test equally well to show that PRO must agree with its controller in number and gender. Consider the following:

(80) a. My poprosili [novogo agenta]i [PROi sdelat’ èto odnomu / odnoj].
we asked new.MASC agent.MASC to-do this alone.MASC / alone.FEM
We asked a new agent to do this alone.

b. [Novyj agent]i xotel [PROi prijti {odin / *odna}].
new.MASC agent.MASC wanted.MASC to-come alone.MASC / *alone.FEM
The new (male) agent wanted to come alone.

c. [Novyj agent]i xotela [PROi prijti {*odin / odna}].
new.MASC agent.MASC wanted.FEM to-come *alone.MASC / alone.FEM
‘The new (female) agent wanted to come alone.’

d. [Petya i Lena]i xoteli [PROi ostat’sja {odni / *odin / *odna}].
Peter and Elena wanted.PL to-remain alone.PL / *alone.MASC / *alone.FEM
Peter and Elena wanted to remain alone.

Recall from above that the noun agent ‘agent’ can be used for both male and female agents. In (80a) the semipredicative odin ‘alone’ can appear in either masculine or feminine, indicating that PRO is either masculine or feminine, depending on whether its controller (i.e., novyj agent ‘new agent’) is specified for φ-gender as masculine, referring to a man, or feminine, referring to a woman (recall from the discussion above that in both cases the attributive adjective, here novyj ‘new’, agrees with the noun in grammatical gender, appearing in the masculine). Similarly, the semipredicative odin ‘alone’ in (80b-c) agrees in φ-gender with the PRO, which in turn must agree in φ-gender with its controller novyj agent ‘new agent’; the latter also triggers agreement in φ-gender on the matrix verb xotel/xotela ‘wanted.MASC/FEM’. This creates an appearance of gender agreement between the matrix verb and

43 It is often assumed (e.g., Chomsky 1995, ch.4) that the associate of there is smaller than DP. As has been pointed out to me by Marcel den Dikken, this can be a problem for the analysis proposed in this paper since the associate of there can serve as a controller:

(i) There arrived [three guests]i without PROi phoning ahead.

However, Chomsky also proposes that the rationale for the associate being a Small Nominal (in the terminology of this paper) is that at LF it complements there, which is itself a D°. Since control relations are presumably established at LF, it is not unreasonable to assume the controller of PRO in (i) to be the combination of there + the associate, a full-fledged DP and not a Small Nominal. Hence, existential sentences are not really a problem for my analysis.
the semipredicative. The contrast in (80d) indicates that the requirement for PRO to agree with its controller applies not only to φ-gender but also to φ-number. On the basis of these data, I conclude that PRO must have fully valued φ-features. For example, the PRO in (80a) can be valued as either masculine or feminine, in (80b) as masculine, in (80c) as feminine, and in (80d) as plural (all of them also specified as 3rd person, unlike the PRO in *I wanted PRO to come alone, which I assume to be 1st person). In sum, I propose that PRO (being a DP-level element) has fully valued φ-features, which must be matched to those of the controller in order to establish the reference of PRO.44

4.3. Reflexives and the puzzle of -sja

Let us now turn to the claim that anaphor binding involves matching of fully valued φ-features. At first sight, this claim seems unproblematic: the definition of anaphor binding includes a condition that an anaphor and its antecedent must agree in gender, number, and person. This is reflected by the following Russian examples:

(81) a. Petya ljubit samogo sebja.
   Peter loves himself

   b. Masha ljubit samu sebja.
      Masha loves herself

   c. Petya i Masha ljubjat samix sebja.
      Peter and Masha love themselves

   However, as has been mentioned in section 2.1.1 above, Small Nominals cannot serve as antecedents of reflexives (and reciprocals), but are compatible with the verbal reflexive marker -sja. The relevant examples are repeated below:

(82) a. *[Pjat’ banditov] prikryvalo sebja ot pul’ Džejmsa Bonda.
    five thugs shielded.NEUT self from bullets James Bond
    Five thugs shielded themselves from James Bond’s bullets.

   b. [Pjat’ banditov] prikryvalos’ ot pul’ Džejmsa Bonda.
      five thugs shielded.NEUT-SJA from bullets James Bond
      Five thugs shielded themselves from James Bond’s bullets.

   In order to account for this contrast, I adopt Babby’s (1975) proposal that -sja is just an intransitivizing morpheme; furthermore, in its reflexive use I take -sja to be not a true anaphor, but a marker of verbs that are lexically specified as reflexives, along the lines of Reinhart and Reuland’s (1993) analysis of the so-called SE anaphors in Germanic languages and Siloni’s (2003) analysis of the hitpa’el morphology in Hebrew. As a marker of verbs that are lexically specified as reflexives, -sja does not have fully valued φ-features and therefore does not require a referential expression (i.e., one with fully valued φ-features as well) as an antecedent, which explains why it is compatible with Small Nominals.

   Several pieces of evidence support this analysis of -sja. First, just like Germanic SE anaphors, -sja is highly restricted in its distribution and is not freely interchangeable with the pronominal sebja

44 A potential problem arises in connection with control in rationale clauses, illustrated in (i).

(i) The boat was sunk [PRO to collect the insurance].

   Note that in such sentences there is no overt controller for PRO in the matrix clause (and the reference of PRO is not arbitrary either). I will take such sentences to be analyzable in terms of “implicit purposeful causer control” (Williams 1985) and will agree with Landau (2000, p. 183) that the alternative in terms of “event control is not a general enough mechanism”; it does not account for sentences such as (ii).

   (ii) Marijuana was smoked [PRO to become illegal in the 1930s].

   Conceivably, such an implicit ‘purposeful causer’ is a referential expression with fully valued φ-features, thus presenting no problem for my claim that control is matching of φ-features between PRO and its controller. I thank Susi Wurmbrand for bringing this issue to my attention and Idan Landau for helpful discussion.
‘self’. The reflexive use of -sja is by no means productive: the reflexive -sja is found with a relatively small set of verbs, including myt’sja ‘wash oneself’, odevat’sja ‘dress oneself’, obuvat’sja ‘put on one’s shoes’, pričesyvat’sja ‘brush one’s hair’, umyat’sja ‘wash one’s face’, česat’sja ‘scratch oneself’, přijat’sja ‘hide oneself’, prikryvat’sja ‘shield oneself’, and some others. But not any verb can be made reflexive by -sja:

(83) a. Maks {myl-sja /* myl sebja}.
   Max washed-SJA /* washed SELF
   Max washes himself.
   b. Maks {nenavidit sebja /*nenavidia-sja}.
   Max hates SELF /* hates-SJA
   Max hates himself.
   c. Maks {vyrugal sebja /vyrugal-sja}.
   Max scolded SELF / scolded-SJA
   Max {scolded himself / cursed}.

With certain verbs – unaccusatives, unergatives, and psych-verbs – -sja cannot be omitted or replaced by sebja ‘self’.45

(84) a. Maks ešče ne {pojavilsja /*pojavil /*pojavil sebja}.
   Max yet not appeared-SJA /* appeared /* appeared SELF
   Max hasn’t showed up yet.
   b. Maks {ulybaetsja /*ulybaet /*ulybaet sebja}.
   Max smiles-SJA /* smiles /* smiles SELF
   Max is smiling.
   c. Maks {boitsja /*boit /*boit sebja} myšej.
   Max fears-SJA /* fears /* fears SELF mice.GEN
   Max fears mice.

Furthermore, as noted in Peshkovskij (1914/1956, p. 114), even when -sja and sebja ‘self’ can be used (apparently) interchangeably, there is a difference in meaning between them:

(85) a. On zastrelil-sja.
   he shot-SE
   He shot himself. [purposefully]
   b. On zastrelil sebja.
   he shot SELF
   He shot himself. [perhaps accidentally]

   Finally, in addition to its reflexive use illustrated above, -sja has many additional intransitive uses, some of which are illustrated below with examples from B. Akunin’s Almaznaja Kolesnica (for further discussion of different uses of -sja, see Peshkovskij 1914/1956, p. 113-121; Babby 1975 and later work; Levin 1985; Williams 1993).

(86) a. Stavki bol’še ne prininajut-sja.
   bets more not accept-SJA
   Bets are no longer accepted.
   b. Vy tak pylko obnimali-s’ s moej Naomi.
   You so passionately hugged-SJA with my Naomi
   You and my Naomi hugged each other so passionately.
   c. Razve on ne sčitaet-sja gosudarstvennym prestupnikom?
   QU he not consider-SJA state criminal
   Isn’t he considered a state criminal?

45 Only such inherent sja-verbs allow both -sja and sebja ‘self’ simultaneously:

(i) On boitsja sebja.  (ii)  *On mylsja sebja.
   he fears-SJA SELF  he washed-SJA SELF
   He is afraid of himself.  intended: He washed himself.
d. Čast’ makuški otkolola-s’.
\[ \text{part top split-off-SJA} \]
Part of the (mountain) top split off.

e. Drat’-sja na duèli mne zapreščeno načal’stvom.
\[ \text{to-fight-SJA on duel to-me forbidden authorities} \]
To fight a duel is forbidden to me by the authorities.

f. Fandorin ne znal vosxiščat-sja emu ili užasat-sja.
\[ \text{psych verbs} \]
Fandorin didn’t know whether he is to admire [the story] or to be appalled [by it].

g. Ja soglasen s vami streljat-sja na tex zhe uslovijax.
\[ \text{special meaning} \]
I agree with you to-shoot-SJA on same conditions
I agree to fight a shooting duel with you on the same conditions.

To conclude, I do not analyze the Russian -sja as a reflexive per se. Thus, it does not have to have fully valued φ-features and, hence, is not sensitive to the presence of fully valued φ-features on an antecedent. Therefore, -sja, unlike true reflexives, can co-occur with Small Nominals.

5. Summary and conclusions

In this paper, I have argued for the existence of Small Nominals, that is, nominals that lack some or all functional projections (QPs or bare NPs, respectively). Moreover, I have shown that such Small Nominals can appear in argument positions, such as subjects, objects, and complements of prepositions; furthermore, heads (such as the Russian cumulative prefix na- or the French preposition en ‘in’) can select their arguments specifically as a Small Nominal (a QP or a bare NP, respectively). I have also argued that when Small Nominals appear in such argument positions, they occupy the same syntactic slot as their DP counterparts. However, I have also shown that Small Nominals differ from their DP counterparts in that the former are non-referential, in the sense of lacking individual reference. Because of their non-referential nature, Small Nominals exhibit the following cluster of properties that distinguish them from DPs:

(87) Small Nominals cannot
   a. have an individuated interpretation;
   b. be specific;
   c. have a partitive interpretation;
   d. take non-isomorphic wide scope;
   e. serve as controllers of PRO;
   f. bind reflexives and reciprocals;
   g. trigger external agreement;
   h. but can participate in Approximative Inversion in Russian;
   i. and can be replaced by pro-QP elements, but not pro-DP elements.

In section 4, I have developed a unified analysis of this cluster of properties of argument Small Nominals which derives from their non-referential nature. This analysis is based on the distinction between an unvalued and a fully valued set of φ-features. I have proposed that nouns have only the former, while DPs have the latter. Thus, I have replaced Longobardi’s contention that D° introduces a referential index with a proposal that D° values φ-features. This subtle amendment has several important effects. First, it allows the existence of argument Small Nominals (lacking the projection of DP), something I show to be necessary on empirical grounds. Second, it allows for a unified analysis of various properties distinguishing Small Nominals from DPs; under this analysis agreement with the predicate, control, and anaphor binding have all been reduced to matching the φ-features of the trigger / controller / antecedent with those of the predicate / PRO / reflexive. Finally, this analysis
allows us to maintain Longobardi’s insight that only DPs are fully referential, which has several important consequences.

From an empirical point of view, it allows us to account for the fact (noted by Baker 2003a, p. 132) that “some phrases headed by functional categories can [be] referential”, that is, a projection of a verb or an adjective can pattern with a nominal projection with respect to phenomena involving referentiality by virtue of the presence of the functional projection DP.

From the theoretical point of view, maintaining Longobardi’s insight that only DPs are referential allows us to maintain the concept of ‘functional architecture’. This approach allows us to project only those functional categories that are semantically motivated, while preventing us from postulating functional categories whose only function is to host moved elements and account for the correct word order. To my mind, this is conceptually a more desirable approach; hence, I have pursued it in this paper.

Another advantage of the analysis of referentiality in terms of $\phi$-features, as proposed in this paper, is that it dispenses with the problematic notion of a ‘referential index’. According to Chomsky (2000, pp. 113-114), the Inclusiveness Condition “rules out… indices”, and syntactic computation can deal only with features, not indices (see also Chomsky 1995, p. 228; 1998, p. 116). Thus, it is preferable to replace referential indices with features or bundles of features. This idea is already found in Fiengo and May (1994, p. xii), who propose to “understand indices to be a structural part of the ‘feature component’ of a category in a phrase marker” (emphasis – mine). Similarly, Pereltsvaig (2001, pp. 184-185) conceptualizes the ‘referential index’ as a D-feature. Here, I take a further step in this direction and replace ‘referential index’ with a set of $\phi$-features.

Finally, since the bulk of the data in this paper come from Russian, it also contributes to the debate on the proper analysis of “languages without determiners” (i.e., article-less languages such as Slavic languages; see Progovac 1998). Although it has been argued in the literature (e.g., Chierchia 1998; Willim 1998, 2000; Baker 2003a, p. 113; Bošković to appear; inter alia) that Slavic languages lack the DP projection altogether, others (e.g., Progovac 1998; Rappaport 1998, 2001, 2004; Pereltsvaig 2001; Franks and Pereltsvaig 2004) have argued that Slavic languages do have DPs. This paper sides with the latter position by showing how a contrast between DPs and Small Nominals can account for a range of empirical facts which cannot be explained if all nominals in Slavic are considered to lack the DP projection.

References:


Bošković, Željko. To appear. On the locality of left branch extraction and the Structure of NP. *Studia Linguistica*.


Crockett, Dina B. 1976. *Agreement in Contemporary Standard Russian*. Slavica Publishers, Columbus, OH.


Received: 19 April 2004

Revised: 20 December 2004

Asya Pereltsvaig
Yale University
Department of Linguistics
P.O. Box 208366
New Haven CT 06520-8366
asya_pereltsvaig@yahoo.com