

The lexical core of a complex functional affix: Russian baby-diminutive *-onok* *

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Abstract

Like other syntactic elements, affixes are sometimes said to be heads or modifiers. In Russian, one suffix, *-onok*, can be either: as a head, it is a size diminutive denoting baby animals, and as a modifier, it is an evaluative with a dismissive/affectionate flavor. Various grammatical properties of this suffix differ between the two uses: gender, declension class, and interaction with suppletive alternations, both as target and trigger. We explore a reductionist account of these differences: the baby diminutive comprises a lexical morpheme plus a functional nominalizing head, while the evaluative affix is the lexical morpheme alone. We contend that our account is superior to two conceivable alternatives: first, the view that these are homophonous but unrelated affixes, and second, a cartographic alternative, whereby diminutives attach at different levels in a universal structure.

1 Introduction

The idea that affixes can be classified as heads or modifiers has been around in morphology for decades. According to this view, morphological heads are like other syntactic heads: they contribute properties such as category and grammatical features which determine the labels of higher nodes (e.g., by percolation or projection). By contrast, morphological modifiers, like adjuncts in syntax, are neutral, contributing meaning but not grammatical features. We explore a case study from Russian where a single affix can serve variously as either a head or as a modifier, with a range of different grammatical properties associated with the two uses. We propose that this variable behavior, and the distribution of associated grammatical differences, can be best understood in terms of another, more recent idea: that affixes themselves may be internally complex, including both lexical and functional components.

The object of our case study is the Russian suffix *-onok*, which has two functions: as a size diminutive (often to refer to baby animals) and as an evaluative with a dismissive/affectionate flavor. These functions go with different grammatical properties: gender and suppletion (shown in (1)). Gender-wise, baby diminutives are consistently masculine, regardless of the gender of the base noun (see (1a)). Suppletion-wise, the baby diminutive undergoes suppletion to *-at* in the plural, and conditions suppletion of roots such as ‘horse’ (see (1b)). On the other hand, none of these properties hold when *-onok* appears in its guise as an evaluative suffix. The evaluative retains the gender of the singular stem (1c–d), fails to undergo suppletion to *-at* in the plural ((1a–b) vs. (1c–d)), and does not condition suppletion on roots (1b–c). These differences might be reason to treat the two *-onok* suffixes as distinct homophonous morphemes. One reason not to is that the two uses of the *onok* morph not only share diminutive meaning, but also share idiosyncratic morphophonology, suggesting that they are the same element at some level of representation. Another reason is that there are several nouns whose evaluatives variably show affixal suppletion in the plural (such as (1e)), reinforcing a tight connection between the two exponents.

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(1) Gender and suppletion in *-onok* nouns, in brief

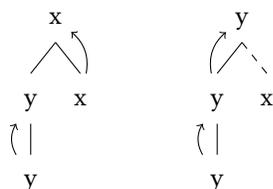
	BASE	GDR	GLOSS	SINGULAR	GDR	PL.	
a.	kris-a	F	‘rat’	kris ⁱ -onok	M	kris-at-a	‘baby rat’
b.	loşad ⁱ	F	‘horse’	zereb ⁱ -onok *loşad ⁱ -onok	M	zereb ⁱ -at-a *zer ⁱ eb-onk-i	‘foal’
c.	loşad ⁱ	F	‘horse’	loşad ⁱ -onk-a	F	loşad ⁱ -onk-i	‘horse (eval.)’
d.	muz-ik	M	‘dude’	muz-itç-onk-a	M	muz-itç-onk-i	‘dude (eval.)’
e.	br ⁱ uk-i	N/A	‘trousers’	—	N/A	br ⁱ utç-onk-i/-at-a	‘trousers (eval.)’

Our goal is to explore a reductionist account, where the variation in gender, suppletive possibilities, and meaning are reflexes of a single structural difference between the two senses, as opposed to synchronically homophonous affixes whose properties are merely stipulated.

We suggest that the most promising analysis is one that treats the two functions as representing a single element (a *vocabulary item* in the terminology of Halle and Marantz (1993), equivalently an *exponent*, *morph* or *pronunciation/UR*) that may be inserted as a head or non-head (modifier/adjunct), in the sense of Williams (1981) and (with different terminology) Lieber (1980); Selkirk (1982) and subsequent work. This parallels treatments of other size/attributive diminutives, including in Russian, in Wiltschko and Steriopolo (2007); Steriopolo (2008, 2014), although curiously with the opposite linking of function to structure.

The key difference is that an affix that is a head determines the features (grammatical category, gender, etc.) of its mother node, while an affix that is a non-head does not—the features of the mother node are determined by the affix’s sister, as schematized in (2). Throughout, we use a dashed line to indicate a modifier, i.e., non-head, affix; the arrows reflect the source of the features at the root node, recalling the implementation of headedness/labeling as percolation in Lieber (1980).

(2) a. x-as-head b. x-as-modifier



Whether an affix is a head or modifier is not always independently predictable. Many derivational suffixes are heads. For example, setting aside expressives/evaluatives (terms we use interchangeably), nominalizing suffixes normally determine both gender and declension class. Any Russian noun derived with *-ostⁱ* ‘-ness’, such as [glúp-ostⁱ] ‘silliness’, is feminine and Class III. Any noun derived with *-nik*, as in [spút-nik] ‘sputnik, fellow traveller’, is masculine, Class Ia.

Diminutives, though, are known to vary in this property across languages (Lieber 1980 contrasts German and Spanish) and even within a single language (see Wiltschko and Steriopolo 2007; Steriopolo 2008). The German diminutive *-chen* is a head—regardless of the gender of the base noun, diminutives are always neuter, exemplifying the pattern in (2a):¹

(3) German diminutives: systematically neuter

	BASE	GENDER	GLOSS	DIMINUTIVE	GENDER
a.	Wein	M	‘wine’	Wein-chen	N
b.	Feder	F	‘feather’	Feder-chen	N
c.	Kind	N	‘child’	Kind-chen	N

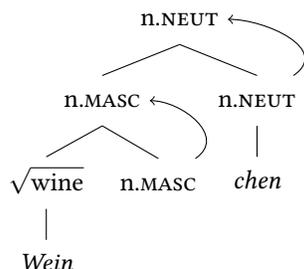
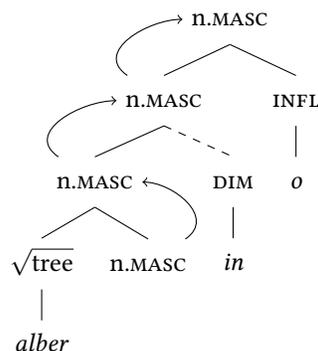
By contrast, Italian diminutives inherit the gender of the base to which they attach, thus Scalise 1988 identifies them as non-heads in the sense of (2b):

¹We transcribe Russian examples in IPA throughout, since phonological properties are a component of our argument. Examples from other languages, such as German and Italian, are given in conventional orthography, as the phonology is not crucial.

(4) Italian diminutives: base gender preserved

	BASE	GENDER	GLOSS	DIMINUTIVE	GENDER
a.	ragazzo	M	‘boy’	ragazz-in-o	M
b.	albero	M	‘tree’	alber-in-o	M
c.	persona	F	‘person’	person-c-in-a	F
d.	mamma	F	‘Mama’	mamm-in-a	F

The difference between German and Italian thus corresponds neatly to the head versus non-head distinction in terms of the labeling of the higher node for gender features (Italian diminutives are also transparent to category features):²

(5) a. German *-chen* is a headb. Italian *-in* is a modifier

We argue that the co-varying grammatical properties of *-onok* track the head versus non-head distinction. The status of baby-*onok* as the exponent of a head is straightforward (§2). The second part of the argument (§3) is more complex for a number of reasons. Some of the properties that vary, like suppletion, are not yet a part of the discussion of head versus non-head affixes—in light of the variation seen in Russian, we will suggest how they might fit within a larger theory, and how they may be related to questions surrounding category-neutral roots, and associated category-defining heads. Another property that comes up in the discussion repeatedly is declension class. While the evaluative diminutives in (1c–d) retain the gender of the base to which they attach, they sometimes change the declension class. Steriopolo (2008) in her discussion of Russian evaluatives treats change in declension class as a diagnostic of head status. We argue that declension class is not the same type of feature as gender and should not, and cannot, be treated as the kind of feature that is part of the percolation/algorithm in structures like (5).

We make this argument both on empirical grounds, revisiting earlier work on the head-modifier distinction, and on theoretical grounds within the Distributed Morphology (DM) framework, where we argue that declension class is a property of vocabulary items (exponents, pronunciations) and not of the abstract morphosyntactic nodes that they realize. Making this distinction invites us to be more explicit about what it means for ‘an affix’ to have flexibility in attachment. We adopt and adapt the idea (Lowenstamm 2015; De Belder and Craenenbroeck 2015; Creemers et al. 2018, inter alia) that certain affixes are internally complex. Just as in DM an apparently simple root, such as *dog*, may be decomposed into a lexical component (the true root: $\sqrt{\text{DOG}}$) and a separate category-determining head *n*, so too, the head-like *-onok* can be decomposed into two elements: a lexical morpheme ONOK and its associated category-determining grammatical element *n*. We suggest that the modifier (evaluative) *-onok* is the same lexical element ONOK, but in the absence of the categorizing head. In the course of this article, we argue that this one structural difference is responsible for the divergent interpretation, gender,

²These representations incorporate the assumptions that roots lack syntactic category (Borer 2003, inter alia) and gender features (Acquaviva, 2008b; Kramer, 2015), and that these are provided by a categorizing affix, a null little *n* in the instances at hand. We return to this point and some other properties of Italian diminutives in §3.3, as they become relevant to our discussion of Russian *-onok*. For the purposes of labeling, we treat inflectional affixes as not contributing features.

suppletion, and declension class properties, and that this may underlie an account of the grammatical “bleaching” that the modifier undergoes compared to the head.

Finally, we consider the alternative of treating the two guises of *-onok* cartographically (§4) and conclude that it is not viable, since no plausible structure captures both the morphotactics and the suppletion possibilities.

We want to clarify that we do not intend to propose a unified theory of all diminutive affixes. The scope of the proposal is confined to the Russian *-onok* suffix, which happens to be a particularly clear and striking example of the morphological differences we are interested in. Even within Russian, however, there are other evaluative suffixes that we would not wish to analyze as related to homophonous head suffixes (see §5.3). For some pairs of phonologically similar affixes that pattern as heads vs. modifiers, it is entirely reasonable to treat them as synchronically unrelated homophones.

2 Baby-Diminutive *-onok* spells out a head

2.1 Baby-diminutive basics

We start by illustrating the baby diminutive function of *-onok*. Nouns formed with this suffix normally refer to offspring (often animals, in which sense it is quite productive) or small/young humans (e.g., [batrák] ‘worker (archaic)’ ~ [batratɕ-ónok] ‘little kid worker’, [dʲjávól] ‘devil’ ~ [dʲjavólʲ-ónok] ‘little devil’), as illustrated in (6). (Throughout, we use ‘young’ and ‘baby’ interchangeably, assuming that the cutoff is determined pragmatically.) One immediately noteworthy point is that the plural form of this suffix is suppletive: [-at] in place of *onok* (the final *-a* is the plural nominative marker; as we show in the full paradigm in (19), suppletion is conditioned throughout the plural, not just in the nominatives shown here).

(6) Russian baby diminutive: on masculines (all decl. class I, nominatives)

	bare N	Gdr	Gloss	BABY-DIM SG	Gdr	BABY-DIM PL	
a.	kót	M	‘cat’	kotʲ-ónok	M	kotʲ-át-a	‘kitten’
b.	úz	M	‘adder’	uz-ónok	M	uz-át-a	‘baby adder’
c.	slón	M	‘elephant’	slonʲ-ónok	M	slonʲ-át-a	‘baby eleph.’
d.	osʲól	M	‘donkey’	oslʲ-ónok	M	oslʲ-át-a	‘baby donkey’
e.	vólk	M	‘wolf’	voltɕ-ónok	M	voltɕ-át-a	‘wolf cub’
f.	paúk	M	‘spider’	pautɕ-ónok	M	pautɕ-át-a	‘baby spider’
g.	dʲjávól	M	‘devil’	dʲjavólʲ-ónok	M	dʲjavólʲ-át-a	‘little devil’
h.	batrák	M	‘worker’	batratɕ-ónok	M	batratɕ-át-a	‘kid worker/ worker’s kid’

Various phonological properties of the suffix are illustrated in these examples. All of these phonological properties apply whether the suffix is used as a baby diminutive or an evaluative, an argument in favor of considering the two uses to constitute a single morph. This is in contrast to other purported doublets in Russian, which upon closer examination do diverge in phonological characteristics (see §5.3).

- **Mutation:** regardless of its function, the affix triggers mutation on many stem-final consonants. Most non-dorsal velarized consonants become palatalized: [kot] ‘(tom)cat’ ~ [kotʲ-onok] ‘kitten’. Most dorsals mutate into stridents, /k, g, x/ → [tɕ, z, ʂ], as in [pauk] ~ [pautɕ-onok] ‘baby spider’.³

³The analysis of mutation is a thorny problem in Russian phonology, and we will not solve it here. For example, both *-onok* and *-at* cause the same exact mutations and are both auto-stressing. That both affixes cause the same mutations is not unusual—several other suffixes (e.g., adjectival formatives) cause similar changes. Suffixes do vary in the details of changes they cause; thus, the alternations triggered by verbal suffixes differ from those of diminutives, and even diminutives vary (for example, the diminutive *-ok* causes mutation on velars (as in [bik~bitɕ-ók] ‘bull (+dim)’), but not on labials (e.g., [dub~dub-ók] ‘oak (+dim)’, [gólubʲ~golub-ók] ‘pigeon (+dim)’). Moreover, both the targets and the undergoers for the various mutations are lexically specific; cf. [medvédʲ]~[medvez-ónok] ‘bear (+baby.dim)’ vs. [lébedʲ]~[lebedʲ-ónok] ‘swan (+baby.dim)’. This lexical

- **Stress:** [-ónok] is a dominant auto-stressing affix (see Melvold 1989, i.a.). This means that regardless of the stress location and type of the stem, nouns derived with [-ónok] bear stress on the suffix. This is also true of the [-át] allomorph.
- **Vowel deletion:** The suffix triggers and undergoes vowel (“yer”) deletion (Lightner 1965 et seq.): [os^hól] ‘donkey’ ~ [os_l^h-ónok] ‘baby donkey NOM.SG’ ~ [os_l^h-ón_k-a] ‘baby donkey GEN.SG’.

Regardless of the gender and declension class of the base, all the *-onok* words trigger masculine agreement and are in the consonant-final declension Class Ia in the singular (see (7); declensions are discussed in more detail in §2.3.2 and §3.3):

(7) Attaches to feminines, and indeclinables

	Base stem	Gender	Decl. Class	Gloss	Baby Dim (MASC)	Gloss
a.	galk-a	F	II	‘jackdaw’	galtç-onok/-ata	‘baby jackdaw’
b.	vidr-a	F	II	‘otter’	vidr ^h -onok/-ata	‘baby otter’
c.	kris-a	F	II	‘rat’	kris ^h -onok/ata	‘baby rat’
d.	l’aguş-k-a	F	II	‘frog’	l’aguş-onok/-ata	‘baby frog’
e.	mış	F	III	‘mouse’	mış-onok/-ata	‘baby mouse’
f.	ris ^h	F	III	‘lynx’	ris ^h -onok/ata	‘baby lynx’
g.	kenguru	common	indecl.	‘kangaroo’	kengur ^h -onok/-ata	‘joey’

The suffix also forms, idiosyncratically, the names for some mushroom species. Although these are lexicalized and are not a small or young version of the corresponding stem, we include these here, since they behave for all grammatical purposes as if they were baby-diminutives. Lexicalized diminutives, with meanings not transparently related to the base (or where there is no longer a synchronic base) are of course well known from many languages (Dressler and Barbaresi, 1994; De Belder et al., 2014). Here too we see the masculine gender and suppletive plural regardless of the gender of the base, if there is one.

(8) Mushrooms

	Base	Gender	Decl	Gloss	Baby Dim (MASC)	Gloss
a.	masl-o	N	Ib	‘butter, oil’	masl ^h -onok/-ata	‘Suillus’ (mushr. sp.)
b.	n/a	–	–	–	op ^h -onok/-ata	‘Armillaria’ (mushroom sp.)

The systematic overriding of the base noun’s gender is the hallmark characteristic of a head (Williams 1981; Selkirk 1982), and is directly parallel to German diminutives in *-chen*, which are neuter, regardless of the gender of the base to which they attach. On the assumption that gender, for nouns, is a property of the category-determining element ‘little *n*’ (Kramer, 2015), we can conclude that *-onok*, too, is a *n* head—although, as we suggest in the next section, it is a special one, with more complexity.

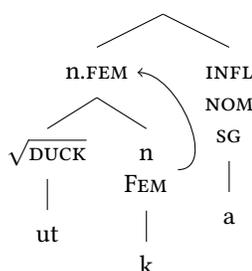
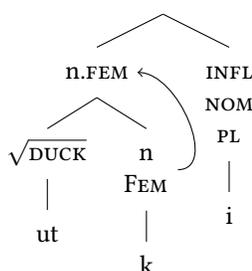
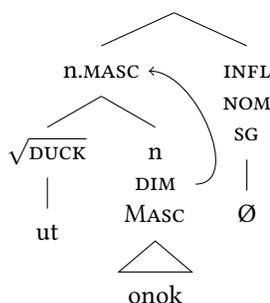
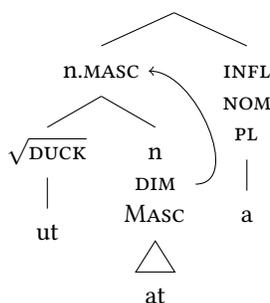
Following one of the key tenets of DM, we assume that the morphemes that enter into morphosyntactic composition are abstract, lacking phonological form—as in other realizational frameworks, the features constituting such abstract morphemes receive pronunciation via rules of exponence (vocabulary insertion). The two exponents, [-at] and [-onok], are licensed in different contexts: [-at] in the plural, and [-onok] elsewhere.

(9) VI rules for baby *-onok* (to be refined)

ONOK, n ↔ -at/ ___] ...PL
 ONOK ↔ -onok

specificity can be analyzed in terms of readjustment rules where both the undergoer and the trigger bear diacritic features. Each suffix can potentially bear multiple diacritics that go with separate rules: thus, both *-onok* and *-at* would be indexed for velar mutation, non-velar palatalization, etc. But *-ok* would be indexed for velar mutation only. Importantly, while *-onok* and *-at* share readjustment rule diacritics, they belong to different declension classes, as we show later—thus, their morpho-phonological diacritics overlap but are not identical.

The following trees illustrate the derivation of the nouns meaning ‘duck’ and ‘duckling’ in singular and plural (nominative case). We assume that all nouns in Russian end in an inflectional suffix, sometimes \emptyset , that is an exponent of case and number. The choice of exponent is a function of declension class, which is intimately related to gender, but in a non-trivial fashion (see §2.3.2). Russian has three genders in the singular (masculine, feminine, neuter), but gender distinctions are neutralized in the plural. Example (10c) shows the masculine gender of the suffix overriding the gender associated with the root, and example (10d) shows the suppletive [at] exponent of *ONOK* triggered by the plural context. A subset of feminine nouns in Russian, like *ut-k-a* ‘duck’, have a feminine suffix *-k*, but animal names of this form lose this suffix in the baby-diminutive. We treat this as an alternation of *n* heads, which are otherwise often zero.⁴ For now, the trees hide the internal structure of nodes realized by *-onok* and *-at*; a more explicit analysis is in the next section.

(10) Baby *-onok*: ‘duck’, ‘duckling’a. *ut-k-a* ‘duck’ [NOM.SG.FEM]b. *ut-k-i* ‘ducks’ [NOM.PL]c. *ut^j-onok* ‘duckling’ [NOM.SG.MASC]d. *ut^j-at-a* ‘ducklings’ [NOM.PL]

This provides the basic account of baby-diminutive *-onok* as a head, like German *-chen*.

2.2 Baby-diminutive *-onok* in more detail

2.2.1 Decomposing *-onok* into *LEX+n*

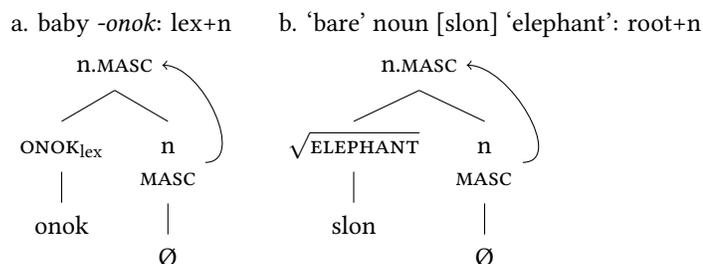
Before we look at the remaining properties, we formalize what the baby *-onok* affix spells out. We borrow from work such as Lowenstamm (2015); De Belder (2011); De Belder and Craenenbroeck (2015); Creemers et al. (2018), which suggests that affixes may be internally complex and include a functional

⁴We do not intend here to adjudicate between views where gender is a property of roots and views where roots are gender-neutral and nouns acquire gender when the root combines with a categorizing *n* head, though we have opted for the latter in our representations. Advocates of this perspective typically invoke licensing conditions on roots (see Acquaviva, 2008b and for a more developed approach Kramer, 2015). An issue this raises is how to ensure that an animal-name root is only licensed with one particular *n* when it refers to an adult animal, while allowing practically any animal-naming root to combine with the masculine *-onok*. For example, combinations of the root [ut-] ‘duck’ with other-gender *ns* is undefined: *[ut- \emptyset] (intended masc.), *[ut-o]. Licensing proposals do not provide a ready means to capture this systematicity, while specifying gender on roots would.

and lexical element.⁵ Seen in this light, the nominalizing baby affix *-onok/-at* is a portmanteau of grammatical/functional features (little *n*, gender) and a lexical “baby” meaning. Nothing in the behavior of baby-diminutive/head *-onok* requires this decomposition (it could just as easily have been a specific instantiation of a nominalizing *n* head). However, since we will make use of this decomposition in our proposal about how to unify the baby and evaluative uses of *-onok* in the next section, being explicit about the decomposition not only lays the groundwork for the next section but allows for a clearer comparison between the two contexts in which *-onok* occurs.

We formally decompose the affix into these two parts, with the functional projection being phonologically null, as shown in (11). The features of the portmanteau head are contributed by *n* and percolate to the whole constituent. Thus, the suffix *-onok* is similar in structure to bare root nominals such as [slon] ‘elephant’. Unlike ‘elephant’, the lexical morpheme ONOK is not a root, and is incapable of appearing as the most deeply embedded morpheme in a free-standing noun (we take this to be the distinction between affixal lexical morphemes and true roots; see §3.2 for more).

(11) Decomposing ONOK



This proposal separates the grammatical features of the *-onok* suffix—such as the masculine gender it assigns—from its lexical contribution (‘young of X’). In §3, we will argue that the lexical element ONOK can appear without the nominalizing head, and then it is interpreted as an evaluative diminutive; the special meaning of ‘baby’ is licensed only in the context of this nominalizing head (cf. Marantz (1996); Arad (2003) and others on idiomatic interpretations in such contexts). The nominalizing head is also responsible for the change in declension class between evaluative (class II) and baby uses of this suffix (class Ia and Ib), discussed in more detail in §2.3.2 and §3.3.

A more precise formulation of the lexical entry and VI rules is given in (12)–(13). (Certain parts of these rules, such as ‘...’ and the “Ib” diacritic on *-at*, are explained in the next section. To avoid confusion, we list the [-onok] exponent without its declension class here, but ultimately we will claim it is Class II; this requires some background and argumentation, which we supply below.)

(12) Lexical Entry for -ONOK

-ONOK; [X ___] (DIMINUTIVE)

Licensed in context of *n*, MASC.; meaning: young of X

(13) VI rules for -ONOK (Revised)

[ONOK, *n*] ↔ -at_{Ib} / ___] ...PL

ONOK ↔ -onok

For the VI [-at], we have taken the view that it spells out the entire subtree in (11a), in the context of plural. Treating it in these terms, rather than as spelling out ONOK in the context of a nominalizing head followed by a plural, is not central to our analysis. We acknowledge that the idea that VIs can spell out subtrees is not uncontroversial, but it is also not unique to our proposal (for a review of approaches within DM and Nanosyntax that assume non-terminal VI rules of this kind, see Gouskova and Bobaljik to appear, §6.2). This approach allows for a cleaner account of a range of facts we are about to consider.

⁵We would like to thank Alec Marantz for suggesting this approach. Faltýnková and Ziková (2019) offer a nanosyntactic analysis of an etymologically related alternation in Czech; their proposal also includes the idea that the affix is morphologically complex, but differs in many substantive details; the facts of Czech are rather different from Russian.

We now turn to three additional issues before considering evaluative *-onok*: the evidence that the head version of the suffix can merge directly with roots (§2.2.2), the conditioning of suffix suppletion across intervening material (§2.3.1), and declension class differences between the allomorphs of head *-onok* (§2.3.2).

2.2.2 Baby-diminutives in more detail: root proximity

When we considered the examples in (10), we noted that the diminutive suffix replaces the feminine nominalizer that the root [ut-] ‘duck’ otherwise requires. We take it that this is another indication that *-onok* is a category-introducing suffix in its own right, and thus we might expect it to combine with bare roots. Indeed, many baby *-onok* diminutives lack free-standing bases (see (14)). Some of the roots appear in other Russian words, while others are cranberries. For example, [op^j-onok] in (14d) (which was mentioned above in §2.1) is etymologically [o-p^jon-ok] ‘around-stump-n,’ or ‘a mushroom that grows around stumps’ (Vasmer 1958). But for contemporary Russian speakers, it appears to have been reanalyzed as [_√op^j-onok]: the plural is [op^jata] rather than [op^jonki].⁶

(14) Root baby diminutives (no free-standing nouns)

Adult?	Baby DIM.SG/PL	Gloss	Root in other words?
a. lošad ^j	zereb ^j -onok/ata	‘foal’	zereb ^j -it-sa ‘to foal’
b. korova	tel ^j -onok/ata	‘calf’	tel-ets ‘Taurus (astrol.)’, t ^j ol-k-a ‘heifer’
c. sobaka	kut ^j -onok/ata	‘puppy’	no, etymology obscure (acc. to Vasmer)
d. —	op ^j -onok/ata	‘Armillaria’	no (reanalyzed from <i>o-p^jon-ok</i> , ‘stump mshr.’)
e. ċċuka	ċċur ^j -onok/ata	‘baby pike’	no (irreg.)
f. svin ^j ja	poros ^j -onok/ata	‘piglet’	poros ^j -it-sa ‘to farrow’
g. ovtsa	jagn ^j -onok/ata	‘baby lamb’	jagn ^j -it-sa ‘to lamb’

Some, but not all of these stand in apparent suppletive pairings with notionally corresponding animal names. For example, [tel^jonok] in (14b) is the regular form for ‘calf’; there is no baby-diminutive formed on the base [korov]: *[korov-^jónok] ‘baby cow’ (as we show in the next section, [korov-^jonk-a] is fine for an adult cow). More generally, the roots for adult and baby animals above are in complementary distribution.⁷ One might take issue with our treatment of these special roots as suppletive, for example, from the perspective of the venerable debate about whether root suppletion is limited to inflectional triggers (see Corbett, 2007 for discussion). For animal names at least, the derivation of a baby-term in [-onok/-ata] is extremely productive, and a lexically listed root blocks the corresponding transparently derived form. Thus, these examples meet the definition of suppletion in, e.g., Mel’čuk (1994, 358), having maximally regular semantics, but maximally irregular phonology.

Structurally, if baby [-onok] spells out a nominalizer that may be root-attached, then it is in a configuration where suppletion of roots can be triggered under any current treatment (see Bobaljik, 2012; Moskal and Smith, 2016 a.o. on the locality conditions on suppletion). We sketch the VIs for suppletive roots in (15).

(15) VI rules for root ‘cow’:

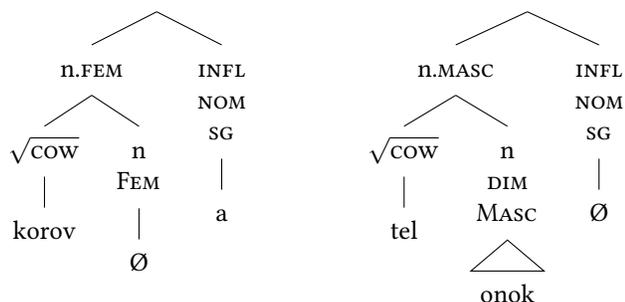
$$\begin{aligned} \sqrt{\text{COW}} &\leftrightarrow \text{tel- / ___] n.DIM} \\ \sqrt{\text{COW}} &\leftrightarrow \text{korov- /} \end{aligned}$$

⁶A search of the Russian National Corpus (RNC) turns up 56 hits for [op^jata], and 38 for [op^jonki]. About a third of the latter are scanning errors (where <опенки> appears in the context where <оценки> ‘assessments’ is expected); quite a few of the remaining ones are in older texts from the 19th century.

⁷The only exception is [poros^jonok] ‘piglet’: the adult-root counterpart [svin^jonok] occurs in the RNC a handful of times, but interestingly, only one of the uses means ‘piglet’; the rest are epithets for a young dirty boy.

(16) Root suppletion with baby *-onok*

- a. korov-a ‘cow’ [NOM.SG.FEM] b. tel
- ¹
- onok ‘calf’ [NOM.SG.MASC]



The conditioning context for root suppletion is the *combination* of *ONOK* and categorizing head *n*. It is obviously not just any *n* that triggers suppletion. Moreover, as noted in the introduction and discussed in more detail in §3, evaluative *-onok* never triggers root suppletion, and neither do other diminutives (e.g., [korov-k-a] ‘cow-dim.’). We have notated this in (15), as if diminutive is an abstract morphosyntactic feature on a par with gender and number. This position is supported by some arguments (Brown and Dryer 2008 argue that diminutive conditions agreement in Walman; see Körtvélyessy 2015 and Corbett and Fedden 2016 for other possible cases). Taking this literally would require re-evaluating our assumptions about percolation being possible from grammatical heads only, to allow for a single node dominating the complex suffix, whose label is the conjunction of the features *n* and *DIM*, from the lexical element, *ONOK*. An alternative would be to allow reference to the complex entity composed of *ONOK* and *n* to serve as the context for suppletion in (15) (as a precedent for this see Merchant, To appear for an analysis invoking structurally complex triggers for suppletion in Greek, but see Christopoulos and Petrosino, 2018 for an alternative analysis of the same data). We leave a decision on this technical point open; some additional root suppletion complexities are discussed in §5.2.⁸

Treating the suppletion-triggering diminutive as a (complex) little *n* that may combine directly with a root may also shed light on the mushroom names noted in (8). Recall that these are lexicalized diminutives, with an idiomatic (non-compositional) meaning. As we already noted, the domain of idiosyncratic interpretation is often thought to be the root plus the first category-defining node above the root (Marantz, 1996; Arad, 2003). These mushroom names lack the compositional semantics associated with the baby-diminutive, but conform to the characterization of the structure that allows non-compositional meanings in the works cited. This analysis can also account for the ambiguities of individual roots such as [batrak] ‘worker (archaic)’, which in the context of baby *-onok* can mean either ‘a child worker’ or ‘a worker’s child.’ Under our account, linking the semantic idiosyncrasy to the categorizing node *n* explains why the non-compositional meanings arise only with the head uses of *-onok*. By contrast, as we discuss in §3, the modifier uses of [-onok] are transparent, with no special interpretations for stems.⁹

While the nominalizer *onok* often attaches directly to roots, it does not select just for roots. The suffix can also attach to larger constituents: for example, a baby turkey is [ind¹-uʃ-onok], adults are [ind¹uk] and [ind¹ejka] (with *-uk* and *-ej* affixes on the root *-ind*). More dramatic are examples from compounds.¹⁰ A few are shown in (17). In this respect, *-onok* is a typical, productive category head: these same compounds and complex stems can appear in adjectives, as well (e.g., [p¹udojéd-sk-ij] ‘cannibalistic’, [nosoróz-ij] ‘rhinoceros-adj’, [ind¹-uʃ-átç-ij] ‘turkey-adj’ (see §5.2 for more on adjectives). The

⁸Yet another alternative would be to give up on suppletion here, and treat the roots as near-synonyms. This would have the challenges of explaining the blocking effects, and the lack of doublets for most of the forms in (14).

⁹Transparency to gender percolation is not strictly correlated across languages with inability to host non-compositional interpretations: De Belder et al. (2014) treat lexicalized Italian diminutives, for example, as modifiers (in our terms) attaching between the root and the first categorizing head.

¹⁰We thank an anonymous reviewer for drawing our attention to the issue of compounds. Compound *-onok* nouns are not listed in dictionaries—most are hapax legomena; we found these in ad-hoc internet searches.

only requirement for the productive use of baby *-onok*, it seems, is that the stem must be interpretable as referring to a young individual.

(17) Compounds with baby *-onok*

	Adult	Morphemes (LNK=linker)	Baby	Gloss
a.	utk-o-nós	duck-LNK-nose	utkonos'ónok	'platypus'
b.	l'ud-o-jéd	people-LNK-eat	l'udojed'ónok	'cannibal'
c.	volk-o-dáv	wolf-LNK-squash	volkodav'ónok	'wolfhound'
d.	nos-o-róg	nose-LNK-horn	nosorozónok	'rhinoceros'
e.	dik-o-bráz	wild-LNK-image	dikobraz'ónok	'porcupine'

In sum, the baby *-onok* not only behaves as a head in terms of its non-transparency to base gender, it also behaves more specifically as a categorizing head, little *n*: it triggers root suppletion, undergoes affixal suppletion (contextual allomorphy), provides the context for idiosyncratic meanings, and may attach either directly to uncategorized roots or to larger structures. All of this points to the string that surfaces phonologically as [-onok] (plural [-at]) as containing a little *n* head. We have opted to therefore treat the suffix as internally complex, as in (11). The additional complexity this representation added to the current section will pay off in section §3.

2.3 Baby-diminutives in more detail: [-at]

2.3.1 *-at* suppletion: locality and declension class

We now turn to the diminutive head as the target, rather than the trigger of suppletion. Here too, structural locality of suppletion plays a role. In (13) we state the alternation such that the PLURAL feature on the inflectional node is the trigger for the suppletive [at] allomorph. As shown in (18), linear adjacency is not required between ONOK and PL. The productive (evaluative) diminutive *-(o)k* may intervene:¹¹

(18) Plural does not have to be string-adjacent to *-onok* to condition suppletion to *-at*

medvez _z -onok	'baby bear'	medvez _z -at-a	'baby bears'
bear-ONOK		bear-ONOK-PL	
medvez _z -onotɕ-ek	'baby bear (dim)'	medvez _z -at-k-i	'baby bears (dim)'
bear-ONOK-DIM		bear-ONOK-DIM-PL	

These examples are easily multiplied. Anything that has an *-at-a* plural can have an *-at-k-i* plural (or even [-át-otɕ-k-i], with *-ok* doubled).

Technically, we captured this non-adjacent conditioning in our VI rule for *-at* in (13), where the context /] ...PL means 'c-commanded by PL'. We intend the context to be further restricted by a general condition on the locality of suppletive triggers, for which there are competing proposals (see Moskal and Smith, 2016 for an overview). Our use of ellipses is meant to allow for intervening material, that is, we do not take linear adjacency (contra Embick, 2010) to be a part of that theory. Examples of apparently non-adjacent suppletion have been adduced in Kastner and Moskal (2018); Ganenkov (2019); Božič (2019); Choi and Harley (2019).

Another aspect of suppletion to *-at* is that it comes with a subtle change in declension class, as we show next. In (19) and (20) are full paradigms for *-onok* derivatives formed from masculines and feminines. The singular *-onok* forms are garden-variety, animate masculines of Class Ia, regardless of the gender and class of the base noun. Thus [šakál] and [šakal^l-ónok] decline identically in the singular. But the paradigm in (19) shows that the declension class of *-at* derivatives in the plural is slightly different from that of most masculines; the differences are in the NOM PL and GEN/ACC PL cells. Whereas [šakál] in the plural takes the totally regular endings for Class Ia, diminutive [šakal^l-át-a] has a nominative plural in unstressed [a] and takes the zero Genitive/Accusative plural. (If these

¹¹Russian has many diminutives, as noted earlier, and we do not consider them all allomorphs of the same morpheme. Some of them, including unstressed [-ok], have been reported to alternate between evaluative and head use (Steriopol (2014)), but as Steriopol observes, head [-ok] is a feminine-forming nominalizer, not a baby diminutive.

forms were to be further suffixed with *-ok*, the *NOM.PL* would be [-at-k-i], and the *GEN.PL* would be [-at-ok-Ø], following the pattern expected after [-ok].)

(19) A full declension paradigm for a baby diminutive and its masculine base, ‘jackal’

	Sg	Pl	Sg	Pl
Nom	şakál	şakál-i	şakal ^l -ónok	şakal ^l -át-a
Gen	şakál-a	şakál-ov	şakal ^l -ónk-a	şakal ^l -át
Dat	şakál-u	şakál-am	şakal ^l -ónk-u	şakal ^l -át-am
Acc	şakál-a	şakál-ov	şakal ^l -ónk-a	şakal ^l -át
Inst	şakál-om	şakál-ami	şakal ^l -ónk-om	şakal ^l -át-ami
Obl	şakál-e	şakál-ax	şakal ^l -ónk-e	şakal ^l -át-ax

(20) A full declension paradigm for a baby diminutive and its feminine base, ‘lynx’.

	Sg	Pl	Sg	Pl
Nom	ris ^l	ris ^l -i	ris ^l -ónok	ris ^l -át-a
Gen	ris ^l -i	ris ^l -ej	ris ^l -ónk-a	ris ^l -át
Dat	ris ^l -i	ris ^l -am	ris ^l -ónk-u	ris ^l -át-am
Acc	ris ^l	ris ^l -ej	ris ^l -ónk-a	ris ^l -át
Inst	ris ^l -ju	ris ^l -ami	ris ^l -ónk-om	ris ^l -át-ami
Obl	ris ^l -i	ris ^l -ax	ris ^l -ónk-e	ris ^l -át-ax

Understanding the importance of these declension class differences, which will be relevant again in our analysis of the evaluative *-onok*, requires a digression regarding the relation of declension class and gender, both in Russian and in general.

2.3.2 Declension class and gender in Russian—an aside

Although the distinction between gender and declension class is sometimes overlooked, and it is easy to find reference to things such as the Russian ‘feminine declension’ or the claim that nouns decline for gender, number and case, it is well established that the gender and declension class are distinct, though related (e.g., Corbett 1982; Halle 1994). The gender of a noun is diagnosed by the agreement/concord controlled by that noun (on remote targets including adjectives, participles, and pronouns). Russian distinguishes masculine, feminine, and neuter genders in the singular, though neuter is only distinct from the masculine in the nominative. Gender distinctions are collapsed in the plural. The pronominal paradigm illustrates (see also (26) for noun endings):

(21) Russian gender, exemplified on pronouns

	MASC.SG	FEM.SG	NEUT.SG	PL.
NOM	on	ona	ono	oni
GEN	jevo	jejo	jevo	ix
DAT	jemu	jej	jemu	im
ACC	jevo	jejo	jevo	ix
INST	im	jej	im	imi
OBL	n ^l om	nej	n ^l om	nimi

While gender determines agreement, declension class determines how case and number are expressed within the noun. There are three broad declension classes, although many finer sub-classes are needed to capture all the details (Zaliznjak 1977). For inanimates, there is a tight (but not perfect) correlation between gender and declension class, but for animates (humans and animals), the situation is more complex. For class II in particular, the gender of an animate noun is determined by its ‘real

world' gender (sex, or notional gender).¹²

- (22) Class I (broadly construed, as in Timberlake 2004) includes both masculines and neuters, although many animate nouns in it have common gender—they can refer to male or female individuals and, at least in the nominative, control gender agreement according to the gender of their referent (e.g., [doktor] 'doctor' can trigger masculine or feminine agreement; see Pesetsky 2013, Matushansky 2013). There are no strictly feminine nouns in class I. Class I has two large subclasses. Class Ia has a zero NOM.SG ending. All Class Ia inanimate nouns are masculine. Class Ib has a NOM.SG ending [-e/-o] and comprises primarily neuters.
- (23) Class II includes both feminines and masculines, including words such as [ženčcina] 'woman' and [muččcina] 'man'. All inanimate Class II nouns are feminine.
- (24) Class III is the smallest, and is unique in being populated by nouns of just one gender, feminine (e.g., [lošadʲ] 'horse').
- (25) Indeclinables: these nouns have the same form regardless of case—for example, [menʲu] 'menu (neut)', [kofe] 'coffee (masc)', [ledi] 'lady (fem)', [kenguru] 'kangaroo (common)'. Gender varies within indeclinables, and the class is mostly loanwords.

A last point (to which we return in §3.3) is that gender is neutralized in the plural, but declension classes are still partly distinguished in NOM.PL and GEN.PL (see Garde, 1998). Most Class Ia nouns and all Class II and III nouns have a NOM.PL [-i/-i]. Class Ib is distinguished by normally taking a NOM.PL [-a]. A subset of Class Ia nouns have a similar NOM.PL [-á] (e.g., [glaz-á] 'eyes'), but, as Garde (1998) notes in his careful study, there is a stress difference: Ia [-á] is stressed, while Ib [-a] is not (e.g., [vin-ó] 'wine (neuter, Ib)' vs. [vín-a] (pl))—much as the baby plural [-a] is unstressed. Classes Ia and Ib also differ in GEN.PL, where Ib (and II) nouns typically have a zero ending, whereas Ia (and Class III) nouns have [-ej] or [-ov] (although there are exceptions). This is summarized in table (26).

- (26) Major declensions of Russian nouns

		Ia		Ib		II		III	
		anim	inan	anim	inan	anim	inan	anim	inan
Sg	Nom	-∅		-o/-e		-a		-∅	
	Acc	-a	-∅	-o/-e		-u		-∅	
	Gen	-a				-i			
	Dat	-u				-e		-i	
	Inst	-om				-oj		-ju	
	Loc	-e				-e		-i	
Pl	Nom	-i/-á		-a		-i			
	Acc	-i/-á	-ov/-ej	-∅	-a	-∅	-i	-ej	-i
	Gen	-ov/-ej		-∅		-∅		-ej	
	Dat	-am							
	Inst	-ami							
	Loc	-ax							

We may now return to the declension of the baby diminutives. The importance of the plural nominative and genitive/accusative forms is that this combination of forms is exclusive to Class Ib—only class Ib nouns may have a nominative plural in unstressed [-a].¹³

The difference in declension class between the singular and plural forms of the baby-diminutives is consistent with the view that declension class is associated with exponents, rather than with the

¹²On the distinction between sex and notional gender, see e.g., McConnell-Ginet (2014) and work cited there.

¹³The class Ib endings here are understandable on historical grounds: prior to the suppletive *-onok*~*-at* alternation, these nouns were all neuters. The baby-diminutive-forming suffix is reconstructed as *-ent* (Trubachev 1960); morpho-phonological changes left this as just [ɛ] in the nominative (and accusative) singular, and [ɛt] elsewhere. This declension is quite parallel to the class Ib *en*-stems, such as contemporary [imʲa]~[imen-a] 'name (+pl)'; the stem-final nasal vowel gave rise to an [-enʲa] alternation. Thanks to Michael Flier for discussion.

underlying abstract morphemes (Harley and Tubino Blanco, 2013). For the *-at* allomorph, belonging to class Ib is not predictable from its phonology or from gender (which is neutralized in the plural). Moreover, its declension class is not shared with the corresponding singular *-onok*, which is Class Ia (default for masculines). For this reason, we have added the diacritic subscript *Ib* to the exponent [at] in (13)—declension class is not a morphosyntactic feature, part of the abstract combinatorics that feed agreement/concord and percolation, but is instead a part of the morphophonological system. This conclusion will be of importance when we return to the difference in declension class between baby-diminutive and evaluative *-onok*, in §3.3.

Before turning to the evaluative, it still remains to account for the declension class Ia behavior of singular [-onok], when used as a baby diminutive. We suggest that the source of its declension class Ia is the null nominalizing head that it combines with: [ONOK,n] together are realized as [-at_{Ib}] in the context of the plural, but in the singular the declension class of [-onok] alone is masked by little *n*, realized as [-∅]. This could work in several ways. One option is to associate the Class Ia diacritic with little *n* itself, [-∅_{Ia}]. This has some evidence behind it: as shown in (27), some Russian stems alternate between masculine and feminine gender without the addition of overt affixes, but with a change of declension:¹⁴

(27) Declension class and gender alternations, null little *n*

	Male X (decl. Ia)	Female X (decl. II)	
a.	suprug	suprug-a	‘spouse’
b.	rab	rab-a	‘slave’
c.	kum	kum-a	‘godparent’
d.	lis	lis-a	‘fox’

A more complex alternative would be to assign the Class Ia diacritic via a default rule for masculines (see Kramer 2015 for discussion). The challenge for this rule is interaction with animacy, as we noted above (see also §3.3). Either way, we have the formal means, and Russian speakers have ample evidence, for attributing the declension class to the syntactic element that makes [-onok] masculine when used as a baby diminutive: little *n*.

2.4 Section summary

To summarize, when *-onok* functions as a baby diminutive, it (i) assigns its own gender (and declension class), (ii) exhibits suppletive allomorphy in the plural, (iii) is able to attach to bare roots, (iv) may trigger suppletion of these roots, and (v) may have non-compositional meaning with certain roots (the mushrooms). Property (i) points to treating *-onok* as a morphosyntactic head, and we have argued that the other properties are also connected in one way or another to head status. We also argued that baby [-onok] is internally complex, spelling out a lexical element and a functional nominalizing head.

This concludes the core discussion of the baby *-onok/-at*. Readers interested in the facts of Russian might wish to consult §5, where we discuss a small set of anomalous forms (such as [ççɛnok~ççɛn¹ata] ‘puppy’), variable suppletion in pluralia tantum and nouns such as [devtçonki~devtçata] ‘gals’, and the appearance of [-at] in some unexpected contexts, such as adjectives and “meat” nouns.

3 As an evaluative

3.1 The basics

Examples of *-onok* in its function as an evaluative diminutive, with an affectionate or dismissive flavor, are given in (28):

¹⁴There are relatively few stems that do this, but a much bigger set shows alternations between bare masculine class Ia and *-k* feminine class II; e.g., [akrobat]~[akrobat-k-a] ‘acrobat (M/F)’, [tiran]~[tiran-k-a] ‘tyrant (M/F)’, etc.

(28) Evaluative *-onok*

	Base	Gdr/Decl	Gloss	with <i>-onok</i> (Sg/Pl)	Gdr/Decl
a.	izb-á	F (II)	‘log house’	izb ¹ -ónk-a/ónk-i	F (II)
b.	sestr-á	F (II)	‘sister’	sestr ¹ -ónk-a/ónk-i	F (II)
c.	kl ¹ átç-a	F (II)	‘nag (horse)’	kl ¹ atç-ónk-a/ónk-i	F (II)
d.	koróv-a	F (II)	‘cow’	korov ¹ -ónk-a/ónk-i	F (II)
e.	lávkk-a	F (II)	‘bench’	lavtç-ónk-a/ónk-i	F (II)
f.	rabót-a	F (II)	‘job’	rabot ¹ -ónk-a/ónk-i	F (II)
g.	rubáx-a	F (II)	‘shirt’	rubax-ónk-a/ónk-i	F (II)
h.	sobák-a	F (II)	‘dog’	sobatç-ónk-a/ónk-i	F (II)
i.	lóşad ¹ -Ø	F (III)	‘horse’	loşad ¹ -ónk-a/ónk-i	F (II)
j.	tsérkov ¹ -Ø	F (III)	‘church’	tserkv ¹ -ónk-a/ónk-i	F (II)
k.	mal ¹ -tç-ik-Ø	M (I)	‘boy (dim-dim)’	mal ¹ -tç-ónk-a/ónk-i	M (II)
l.	muzç-ik-Ø	M (I)	‘man, dude’	muzç-itç-ónk-a/ónk-i	M (II)
m.	star-ik-Ø	M (I)	‘old man’	star ¹ -itç-ónk-a/ónk-i	M (II)

These are evaluative and not size or age diminutives: [sestr¹onka] ‘sister (eval.)’ does not have to be a younger sister. Likewise, the *-onok* suffixed versions of ‘horse’, ‘dog’, and ‘cow’ in (28) may refer to adult animals. The evaluative function is further illustrated by the many inanimate forms such as ‘log house’, ‘church’, ‘work’, and ‘newspaper’ [gazet¹-ónk-a] (fr. [gazeta]), which are incompatible with a baby meaning.

Two contrasts between evaluatives and baby diminutives should stand out from this list: First, unlike the baby diminutive forms with *-onok*, the evaluative *-onok* does not show suppletion in the plural: *[izb¹ata], *[sestr¹ata], *[rubaxata]. The *-ata* plural is indeed impossible for all of the examples given in this section.¹⁵ In addition, all of the examples in (28) are in declension class II (*-a* final Nom.Sg) rather than declension class Ia (see §2.3.2). More subtly, all of the forms in (28) preserve the gender (though not the declension class) of the base to which they attach. Note that the final three forms are Masculine, despite being members of Class II. Finally, the evaluative *-onok* does not trigger root suppletion, even for roots that undergo suppletion in the baby-diminutive:

(29) Diminutives of [lóşad¹] ‘horse’

		Sg.	Pl.	
a.	Baby	zereb ¹ -ónok	zereb ¹ -át-a	‘foal(s)’
b.	Evaluative	lóşad ¹ -ónk-a	lóşad ¹ -ónk-i	‘horsey/horsies’

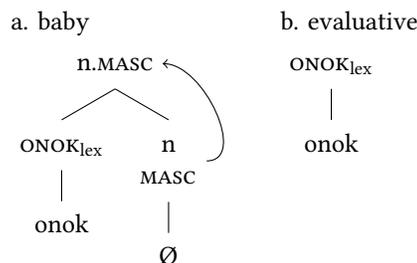
We concluded the previous section by noting that baby-diminutive *-onok* (i) assigns a fixed gender, (ii) exhibits suppletive allomorphy in the plural, (iii) is able to attach to bare roots, and (iv) may trigger suppletion of these roots. Evaluative *-onok* differs in all four of these properties. Our task here, then, is to see whether we can explain these covarying differences in structural terms.

3.2 Evaluative *-onok*: A headless morph

In §2.2.1, we suggested that baby *-onok/-at* are exponents of a complex structure comprising a lexical diminutive and a functional little *n* head. This analysis attributes to little *n* all the properties that evaluative *-onok* lacks. The evaluative is just the lexical morpheme without the nominalizing head:

¹⁵This is based on the intuitions of the native speaker co-author and on a search of the RNC. We did not find hits for any feminines with *-ata*. For the masculines, [staritcata] ‘old men (baby.dim)’ and [muzitcata] ‘dudes (baby dim)’ have one hit each, the former in a ‘poetic license’ context alongside other *star*-derived expressives referring to old men. ‘Boys’ does occur with *-ata*, [mal¹tçata] (14 RNC hits), though so does [mal¹tçonok] ‘boy-BABY.DIM-SG’. Neither is surprising, since a boy is a baby human; additional examples of this sort include [det¹onok], [malışonok] (both are double diminutives of sort, formed on roots for ‘child’ or ‘baby’). See §5.1 for a discussion of other, more clearly evaluative *-ata* cases and a possible analysis.

(30) Baby vs. evaluative ONOK



As we mentioned, the structure explains the slight difference in meaning between baby and evaluative *-onok*: as a lexical element, its specific lexical meaning (the ‘baby x’ meaning) is defined only when it merges with the nominalizing head, a well-established feature of lexical morphemes when combined with category heads (recall §2.2.2). When it occurs by itself, it has only a semantically ‘bleached’ meaning, contributing only the evaluative or dismissive connotations typical of a diminutive. Crucially, though, the evaluative is only flexible to the extent that diminutives themselves are flexible; as we will show shortly, it is not close enough to the roots of the stems it modifies to condition idiosyncratic meanings for those roots.

The idea that affixes may be lexical is not new: for example, in Navajo, affixes are classified into lexical and functional, with the two classes semantically and phonologically distinct (Alderete 2003; McDonough 2003). In Halkomelem, roots can act as affixes; the following examples show that there is an overt categorizing head (*m-*, *t-* and a few others) that appears when the roots form free words (Wiltschko 2009, p.200, 209):

(31) Halkomelem lexical affixes vs. categorized free-standing nouns

	<i>as a lexical affix</i>		<i>as a free noun</i>
a.	-éqsən	‘nose, point’	m-éqsən ‘nose’
b.	-məx ^w	‘land, people’	t-éməx ^w ‘land, earth’
c.	-(e)wi:l(s)	‘dishes’	ló:thel ‘dish’

Wiltschko (2009) analyzes lexical affixes as roots merging without their category heads. The difference between Halkomelem and Russian *-onok* is that *-onok* cannot merge with little *n* as a free noun. In English, too, there are affixes that have lexical meanings, such as *-itis*, that are not related to their root counterparts (*ill*, *disease*, *inflamed*, etc.). As long as we distinguish between roots and other lexical morphemes, we can begin to get a handle on the morphosyntactic distinction between roots and affixes that have some lexical characteristics but no recognizable root properties. For lexical morphemes whose meanings depend on a local categorizing head, merging a root without the categorizing head should yield something like ‘semantic bleaching’—the loss of idiosyncratic, contextually-determined meaning. See Saito 2021 for an approach to grammaticalization (the change from lexical verb to functional element) along these lines. We suggest tentatively that many evaluative modifiers may be historically derived in this way, in what may result in two unrelated homophonous lexical entries (see §5.3 for possible examples) or evaluatives that no longer have “non-bleached” head counterparts. The difficulty in extending our analysis to some of the cases lies in identifying the precise source of evaluative meanings: in the case of the baby diminutive vs. evaluative uses of *-onok*, there is a clear core diminutive meaning that is preserved between the bleached and non-bleached entries, which we attribute to the lexical ONOK morpheme they share. But this is not always the case for evaluatives, such as the *-icc* suffixes discussed in §5.3.

We now consider the properties of evaluative *-onok* in more detail, with the goal of reducing all of them to the structural characteristics we just outlined, namely, the absence of the *n* head.

3.3 Gender and Declension class again

We begin with transparency for grammatical features. When gender alone is considered, the difference between baby and evaluative *onok* neatly tracks the behavior of German versus Italian, our paradigm

example of the difference between a head and a modifier. However, declension class is different from gender and category. As illustrated in (28), all evaluative *-onok* diminutive nouns are declension class II (nominative singular in *-a*) regardless of the declension class of the root. Steriopolo (2008) et seq. treats declension class on a par with gender, and includes non-transparency to declension class, like non-transparency to gender, as a diagnostic of head status. In the present case, this would leave us with a paradox, since evaluative *onok* is transparent to gender, but contributes its own declension class. (Compare, for example, the brief discussion of evaluative *-en'k*, which similarly introduces declension class but is transparent to category, and which is left as an unresolved paradox in Steriopolo (2008, 174).) We argued in §2.3.2 that declension class should not be treated in the same manner as gender features. Here, we show that the difference in declension class falls out naturally from our analysis, as long as we assume that *-onok* is Class II, but that its class can be overridden by little *n* [-Ø_{Ia}].

In general, cross-linguistically, declension class is not a feature that percolates (cf. Lieber, 1992, 80-86). Consider Italian diminutives, illustrated in (32). Italian nouns typically end in a vowel, which is often informally described as expressing gender and number (case is not distinguished on nouns in Italian). The basic final vowels are: fem.sg: *-a*, masc.sg: *-o*, fem.pl: *-e*, masc.pl: *-i*. Like Russian, though, the relation of the final vowels to gender is indirect, mediated by a pared down declension class system. Many Italian nouns are irregular: lexically specified to occur with a final vowel distinct from the default for their gender and number (or Ø), shown in (32). As Dressler and Barbaresi (1994, 94-95) note, although Italian diminutives generally preserve the gender of the base they attach to, they systematically fail to preserve declension class, and (other than lexicalized exceptions) always revert to the default declension class (vowel) for the gender (and number, not shown) that they inherit:

(32) Default declension class in Italian diminutives

	Gender	Regular?	Sg	Dim	Regular?	Gloss
a.	M	Yes	top-o	top-in-o	Yes	'mouse'
b.	M	No	duc-a	duch-in-o	Yes	'duke'
c.	M	No	cinem-a	cinem-in-o	Yes	'cinema'
d.	M	No	verm-e	verm-ett-o	Yes	'worm'
e.	M	No	film	film-in-o	Yes	'film'
f.	M	No	gnu	gnu-in-o	Yes	'gnu'
g.	F	Yes	mamm-a	mamm-in-a	Yes	'Mama'
h.	F	No	man-o	man-in-a	Yes	'hand'
i.	F	No	tribù	tribù-in-a	Yes	'tribe'

The preservation of the base nouns' gender suggests that the diminutive suffix is not lexically specified for gender features. It is for precisely this reason that Scalise (1988, 233-235) treats the diminutive suffixes in Italian as nonheads rather than heads. And as Dressler and Barbaresi (1994) note, the change in declension class, though seeming to be a head-like property, is not the introduction of new information, but instead a loss of the idiosyncratic declension class information associated with a stem. The diminutive disrupts the relationship between the root and the final vowel, as expected if declension class is part of the morphophonology, since the two are not adjacent.¹⁶

Turning back to Russian, we have already shown that declension class is usually determined by the last suffix, and we suggested that class features belong to exponents (recall §2.3.2). In discussing the [at] suppletion in §2.3.2, we noted that declension class is tied to individual allomorphs/exponents, rather than to the underlying abstract morphemes (see Harley and Tubino Blanco 2013 on suppletive root alternants in different inflectional classes in Hiaki). In the baby diminutives, [-at] and [-onok] belong to different declension classes, Ib and Ia respectively, although they are suppletive allomorphs of the same underlying morpheme. Declension class is not part of the morphosyntactic combinatorics, but rather a part of the morphophonological system, associated with particular exponents.

¹⁶We do not aim to account for Italian declension class, but similar cases—such as Spanish—have been attributed to gender-to-declension-class redundancy rules (see Kramer 2015, 239 for a proposal). Spanish of course introduces additional complications, which we do not address here.

We take it that, as a morphophonological feature, declension class diacritics are visible under linear adjacency. Declension class, unlike gender and syntactic category, is not the type of information that ‘percolates’ through non-head-morphemes in word-structure trees. Nor should we expect it to, once one draws the distinction between abstract morphemes and the phonological exponents of those morphemes. The labeling algorithms, such as those in Lieber 1980; Williams 1981; Selkirk 1982, which distinguish between a head and a non-head, are algorithms that determine the morpho-syntactic features of the topmost node, as a function of its daughters. These algorithms manipulate morpho-syntactic features and, in a framework like DM, precede vocabulary insertion. But declension class is a property of vocabulary items or exponents, not of the underlying abstract morphemes. Thus such features should not be subject to feature percolation (or equivalent operations).

Under these assumptions, the explanation for why the evaluative *-onok* has declension class II is that this is the declension class of the VI that serves as the exponent of the lexical morpheme ONOK . When ONOK combines with little $n\text{-}\emptyset_{\text{Ia}}$, the nominalizer’s declension class determines the pronunciations of subsequent affixes, and -ONOK ’s own declension class is overridden.

The paradigms in (33) and (34) show the patterns more fully. In both paradigms, the declension classes of the base nouns (III for [loʂad^ɪ] ‘horse’, Ia for [muzik] ‘man, dude’) are replaced with II, even as their genders are retained.

(33) A full paradigm for [loʂad^ɪ] ‘horse’ and its *-onok* expressive form

	Sg	Pl	Sg	Pl
Nom	loʂad ^ɪ	loʂad ^ɪ -i	loʂad ^ɪ -ónk-a	loʂad ^ɪ -ónk-i
Gen	loʂad ^ɪ -i	loʂad ^ɪ -éj	loʂad ^ɪ -ónk-i	loʂad ^ɪ -ónok
Dat	loʂad ^ɪ -i	loʂad ^ɪ -ám	loʂad ^ɪ -ónk-e	loʂad ^ɪ -ónk-am
Acc	loʂad ^ɪ	loʂad ^ɪ -éj	loʂad ^ɪ -ónk-u	loʂad ^ɪ -ónok
Inst	loʂad ^ɪ -ju	loʂad ^ɪ -ámi	loʂad ^ɪ -ónk-oj	loʂad ^ɪ -ónk-ami
Obl	loʂad ^ɪ -i	loʂad ^ɪ -áx	loʂad ^ɪ -ónk-e	loʂad ^ɪ -ónk-ax

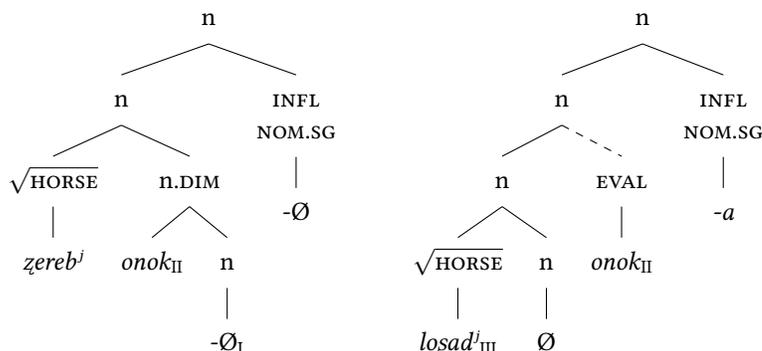
(34) A full paradigm for [muzik] ‘man’ and its *-onok* expressive form

	Sg	Pl	Sg	Pl
Nom	muzik	muzik-í	muzitɕ-ónk-a	muzitɕ-ónk-i
Gen	muzik-á	muzik-óv	muzitɕ-ónk-i	muzitɕ-ónok
Dat	muzik-ú	muzik-ám	muzitɕ-ónk-e	muzitɕ-ónk-am
Acc	muzik-á	muzik-óv	muzitɕ-ónk-u	muzitɕ-ónok
Inst	muzik-óm	muzik-ámi	muzitɕ-ónk-oj	muzitɕ-ónk-ami
Obl	muzik-é	muzik-áx	muzitɕ-ónk-e	muzitɕ-ónk-ax

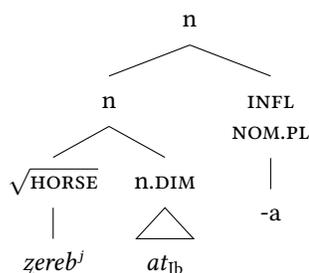
The following trees illustrate our analysis. In the baby diminutive of ‘horse’, [zereb^ɪonok] ‘foal’, the declension class of the VI *-onok* is overridden by the nominalizer. In the evaluative diminutive of ‘horse’, *-onok* shows its declension class, determining the pronunciation of the adjacent nom.sg *-a*. In the plural baby diminutive, the suppletive portmanteau introduces declension class Ib, but this in turn can be overridden if a further evaluative diminutive intervenes linearly between this exponent and the exponent of inflection.

(35) Baby and evaluative horse diminutives

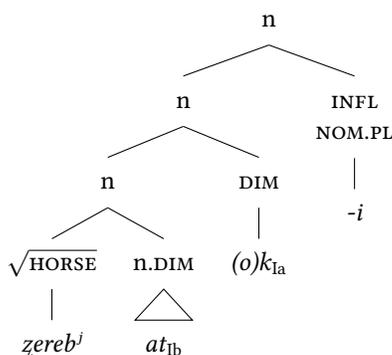
a. Baby diminutive singular: Cl. Ia b. Evaluative diminutive: Cl. II



c. Baby diminutive plural: Cl. Ib



d. Baby + second diminutive, plural: Cl. Ia



In sum, the assumption that declension class diacritics are associated with exponents (rather than the abstract morphemes that vocabulary items are exponents of) underlies three empirical observations:

- Declension class does not percolate in Italian—the diminutives ‘revert’ to the default declension class for their gender, because they are not lexically specified for declension class.
- Declension class does not percolate in Russian—*onok* evaluatives have the same gender as their base, but do not inherit the declension class of their base.
- Declension class may differ between suppletive exponents of the same underlying morpheme.

The evidence we have discussed so far is thus consistent with treating the difference between baby and evaluative *-onok* as reflecting head versus non-head derivations, respectively. Treating the baby diminutive as internally complex, in turn, explains the otherwise puzzling change in declension class between the baby and evaluative uses. But why is the evaluative class II, of all the classes Russian has?

3.3.1 Why Class II? A Diachronic Generalization

We noted in §1 that most derivational suffixes in Russian (such as [-ostʲ] ‘-ness’) contribute specific gender and declension class when they derive nouns. Evaluative suffixes have more varied behavior with respect to both gender and declension class. As noted by researchers such as Steriopo (2014), some evaluatives appear to alternate between declension classes, perhaps as a function of gender (see §5.3 for one example).

In talking about the declension classes of evaluatives, it is important to keep in mind that they are selective, both phonologically and morphosyntactically (Polivanova 1967; Hippisley 1996; Gouskova et al. 2015). They are extremely productive as a class in Russian, but no individual suffix can attach to

every stem. For example, feminines are diminutivized with *-ok* and *-otck*, among others. Masculines are diminutivized with *-ok*, *-tcik*, *-ik* in a way that is partially phonologically predictable (Gouskova et al., 2015). Since declension class and gender are correlated, it can be hard to tell which aspect of the nominal morphology is targeted by selection, and what the direction of this relationship is in some cases. Moreover, Russian suffixes exhibit a fair amount of homophony, at least superficially—there are several morphemes that look like *-ets* orthographically, for example, but appear to have diverged in terms of stress properties, meaning, and distribution (see §5.3 and Zaliznjak 1985, pp.82–86 for discussion).

But there is one generalization, due to Steriopolu (2017), that runs throughout the evaluative class: the vast majority of Russian evaluatives belong to Class II. Steriopolu’s list is in (36) (converted to IPA). The example in (37) demonstrates the Class II generalization for *-uk*, one of the derogatory evaluatives. Regardless of the declension class of the base, the derived evaluative is Class II:

(36) Steriopolu’s list of evaluative suffixes

Affectionate		<i>-an^j, -aʂ, -on, -ul^l, -un^j, -ur, -us^l, -uʂ</i>
Derogatory		<i>-ag, -ak, -al, -ar, -ax, -il, -in, -ob, -ot, -ox, -ug, -uk, -ux</i>

(37) Expressives of attitude: declension class and gender with [-uk]

tvar ^j	‘beast, animal’	F	III	tvar ^j -uk-a	‘beast (derog.)’	F/common	II
gad	‘bastard, snake’	M	Ia	gad ^j -uk-a	‘viper, bastard’	F/common	II
zl-o	‘evil (noun)’	N	Ib	zl ^l -uk-a	‘angry, vicious person’	F/common	II
zmej-a	‘snake’	F	II	zmej-uk-a	‘snake (derog.)’	F/common	II

This declension class pattern holds even when the evaluatives are derived from things other than nouns (e.g., *za-vir-ux-a* ‘liar (eval)’ could not have gotten its declension class from any “base noun”, unlike *-onok* evaluatives). In addition, the majority of hypocoristics—inherently evaluative—are class II, regardless of gender and the declension class of the source names.

(38) Hypocoristics are Class II and retain source name’s gender

	Name	Decl. Class	Hypocoristic	Decl. Class	Gender
a.	aleksánder	I	sán ^l -a	II	M
b.	kuz ^l má	II	kúz ^l -a	II	M
c.	galína	II	gál ^l -a	II	F
d.	l ^l ubov ^j	III	l ^l úb-a	II	F

These observations point to an overarching (but not absolute) generalization:

(39) EVAL → Class II

This generalization might be a relatively recent diachronic development. Several Russian evaluatives vary between declension classes Ib and II. This variation is likely facilitated in dialects where the unstressed vowels /o, a/ neutralize, so Ib and II have homophonous NOM.SG endings (see Bethin 2012). For example, *-iʂek* attaches to masculines to form evaluatives of either Class Ib (*gorod~gorod-iʂk-o* ‘city (+eval)’) or Class II (*mal^ltcik~mal^ltc-iʂk-a* ‘boy (+eval)’). Even Lomonosov (1755, §243) comments on the variation. In his time, both declension class and gender varied (as diagnosed by adjective agreement in his examples), whereas in contemporary Russian, masculine evaluatives invariably trigger masculine agreement regardless of declension class. There is a trend towards using Class Ib for inanimates, and II for masculine animates.

For our small set of *-onok* masculines, this trend towards herding animate masculine evaluatives into Class II can be seen over time in the Russian National Corpus (40).¹⁷ There is a smattering of

¹⁷For completeness, we also searched for [-onok] forms for all these nouns. There were a few evaluative uses of [-onok], even for inanimates such as [kulatʂonok] ‘fist’ (3, 1871–1926) and [s^lurtutʂonok] ‘coat’ (1, 1864)—but these are obsolete today. For animates, clear evaluative uses were few, ranging from 0 (duratʂonok ‘fool’) to 10 (muziʂonok, mostly early 20th century). There were a few unsurprising baby diminutives for boys, [mal^ltʂonok] (28, early 1900s), [vnutʂonok] (25, modern). We discuss other evaluatives, such as pluralia tantum (e.g., [stiʂonki] ‘poems’), in §5.1; these are inanimate and have what could be Ia ‘bases’ ([stix]

inanimate masculines with *-onko_{Ib}*, but their use has dwindled to nothing in contemporary Russian (two 19th century uses, one in 1965, one in 1978). For the animates, we see two trends. First, *-onka_{II}* forms noticeably outnumber *-onko_{Ib}* forms. Second, some of the forms have completely fallen out of use: *mal'tconko* ‘boy’ last occurs in 1930, and most uses of *muzitconko* ‘dude’ and *staritconko* ‘old man’ occur in the 19th and early 20th centuries. By contrast, usage of *muzitconka* especially is robust in the 21st century.

(40) RNC: number of documents using *-onka* and *-onko* evaluatives

			Eval. nom II		Eval. nom Ib	
anim.	muzik	‘dude’	muzitconka	268	muzitconko	86
	starik	‘old man’	staritconka	24	staritconko	17
	mal'tcik	‘boy’	mal'tconka	297	mal'tconko	23
	vnuk	‘grandson’	vnutconka	0	vnutconko	1
	durak	‘man-fool’	duratconka	0	duratconko	1
inan.	pidzak	‘jacket’	pidzatconka	0	pidzatconko	2
	kulak	‘fist’	kulatconka	0	kulatconko	1
	s'urtuk	‘coat’	s'urtutconka	0	s'urtutconko	1

Thus, unlike baby diminutives, the expressive use of *-onok* is not fully productive, but there does appear to be a striking gap: there are no inanimate masculines with this suffix. There are well attested *-onok* expressives from feminine class II bases (both animate and inanimate), and a handful from feminine class III bases (itself a non-productive class). No neuters combine with *-onok*.

We suggest that our account sheds light on this skew. In discussing the relation between gender and declension class in §2.3.2, we noted that exactly this distribution characterizes Class II: it includes feminines of any animacy, and masculine animates, but has no inanimate masculines and no neuters. As *-onok* has shifted diachronically to membership in Class II, novel forms with this suffix only gain currency if they are consistent with this extremely robust independent generalization about gender and animacy in Class II nouns.

3.3.2 On Productivity differences

The preceding discussion partly explains why the evaluative *-onok* is less productive than the baby suffix. The evaluative’s declension class II is incompatible with some gender and animacy specifications. By contrast, the productivity of baby *-onok* is not that constrained: any stem that can be interpreted as a young individual is fair game. Moreover, baby *-onok* contributes its own gender, so its declension class does not need to pass any compatibility checks; the suffix simply overrides whatever specifications the stem has.

We also saw that these generalizations have been shifting over time: masculine inanimates used to combine with evaluative *-onok*, and there were more masculine animates with evaluative *-onok* than there are today. We do not know whether these shifts are due to random fluctuations in usage or to structural change. It does seem clear that Russian speakers treat the evaluative as restricted; our account predicts as possible many forms that do not occur. For example, as a reviewer points out, any masculine animate noun, such as [brat] ‘brother’, should combine with the evaluative, and yet *[brat'ónka] is bad. Similarly, we get divergent results when searching for hapax legomena (Baayen and Lieber (1991)) of baby vs. evaluative forms of feminine animate stems. Our account generates both, and yet for stems such as [barakúda] ‘barracuda’, we find the baby [barakud^l-ónok] but not the evaluative *[barakud^l-ónk-a]—again, consistent with the difference in productivity.¹⁸

‘poem’). But these evaluatives cannot be singular (where they would be unambiguously masculine), in line with the generalization made here.

¹⁸For these stems, evaluatives are not ruled out outright: both [barakúd-ušk-a] and [brat^l-išk-a] do occur. So do regular, not purely evaluative diminutives such as [brát-ik]/[brat-ók] ‘brother’, and [barakúd-otc-k-a] ‘barracuda-dim’. The latter form hints at another possible source of productivity differences: stress. In terms of stress, most productive diminutives and evaluatives that combine with feminine stems tend to be recessive, unaccented suffixes—not dominant auto-stressing, like *-onok*. Perhaps the pressure to keep stress on the base, not uncommon for diminutives could explain the difference (Gilbert, 2021 has a recent

We have been assuming that morphological productivity is arbitrary, determined by usage. What an affix can attach to cannot be fully predicted (this is a standard assumption in morphology; see Aronoff and Anshen 2001 and others). One of the well-known factors in productivity is type frequency: of all the forms that could combine with the suffix, how many do? (see, e.g., Bybee 1995; Albright and Hayes 2003). The set of animate masculines that combine with evaluative *-onok* is small, which means the likelihood of this affix combining with other animate masculines, such as [brat] ‘brother’, is also small. Productivity also depends on the strength of generalizations over the list of forms that the suffix combines with (sometimes known as sublexicons, see Gouskova et al. 2015 on Russian diminutives specifically). Learners can generalize over the sets of items with an affix: if, for example, most of the stems with evaluative *-onok* are feminine, the suffix is unlikely to be productive on masculines. But whether an affix is productive is a separate question from whether Russian speakers know the generalizations about existing words derived with the affix. In our account, speakers have grammatical knowledge about how the existing words are put together, even if the suffixes are not fully productive.

Relatedly, it is not always possible to predict with full certainty what a new word might mean, even when it is derived by a productive suffix such as baby *-onok*. We noted in §3.3.1 that baby diminutives can be used evaluatively, although it is not their core meaning. A recent example is [naval'n'ónok], ‘a young follower of Navalny (a Russian politician).’ This word could, presumably, refer to Navalny’s children, but its normal modern usage is evaluative/dismissive, even though the core meaning ‘young’ is there, as well. We hypothesize that the dismissive flavor is added in the DM Encyclopedia, and inspired by *okt'abr'onok* ‘Child of October.’¹⁹ While we could pick such cases apart and attempt to construct a semantics for baby diminutives that allow them to be used as expressives in combination with some roots, we suspect this is ultimately not the right approach. Some of these matters have to be left as accidents of usage. Compare English: *little*, *tiny*, and *small* are all synonymous, but the latter is not usually used expressively, while *little* and *tiny* are. It is not clear that this fact needs to be derived from special semantics for these adjectives.

3.4 Suppletion: Locality, Heads, and Adjuncts

Before closing this section we return to the one other point of difference between the two functions of *-onok*, namely, their systematically different behavior with respect to suppletion. As far as we know, no existing discussions of the head/modifier distinction among affixes address suppletion at all, and no theory of suppletion known to us makes clear predictions in this regard. This section will therefore be tentative, but we conjecture that this may be a previously unrecognized difference between heads and adjuncts. We speculate here on how this may be captured, but leave verification (and deeper explanation) of this conjecture for future work.

We consider here suppletion of the affix itself [-onok]~[-at] and suppletion of the root triggered by the affix [korova]~[tel'*-onok*] ‘cow/calf’. Under our account, evaluative *-onok* fails to undergo suppletion in the plural since the rules of exponence, repeated here, make reference to the category feature *n* in the context of the plural allomorph:

- (41) VI rules for -ONOK
 ONOK, n ↔ -at / ...PL
 ONOK ↔ -onok

discussion). But this story would require some subtlety for Russian. The rule of stress shift for *-onok* is easy to apply, and clearly it does not limit the productivity of the baby version of the suffix. Zaliznjak (1985) notes that Russian suffixes have been shifting over time towards dominance, and Russian has plenty of dominant evaluatives, just usually not on feminines.

¹⁹This refers to a member of a Soviet-era organization for children, similar to American Brownies. We would like to thank an anonymous reviewer for the [naval'n'ónok] example. The reviewer suggests that this case is purely evaluative/dismissive, but in most internet hits, it seems that it is reserved for young followers of Navalny: *Вот юные навалънята – его подписчики и сторонники – спорят о Навальном со своим 90-летним дедом Львом Александровичем Мартыновым.* ‘Here, young naval'n'ónok—his followers and supporters—argue about Navalny with their 90-year-old grandpa Lev Aleksandrovich Martynov.’ source: <https://smotrim.ru/article/2523873>. *навалънёнок: полит. жарг., пренебр. юный сторонник российского политического деятеля А. А. Навального* ‘naval'n'ónok: political jargon, dismissive. young follower of Russian politician A.A. Navalny’. source: <https://ru.wiktionary.org/>, both accessed on April 12, 2021.

Since *n* is by assumption not present when *-ONOK* is used as an evaluative modifier, only the default exponent *-onok* can serve as a pronunciation of the non-head version of this morpheme. This allows us to describe the context of suppletion as restricted to the head position. Whether this rises to the status of an explanation depends on what other possibilities the theory allows. Does the theory predict the possibility of (a) symmetrical suppletion in both head and non-head contexts, or (b) suppletion only in the non-head context—a mirror image of the actual situation? The symmetrical scenario can be easily generated by omitting *n* from the rule in (41). On the other hand, the mirror-image scenario would be hard to generate if rules of contextual allomorphy cannot refer to the absence of a particular element, but only to its presence. In such a case, there may be no way to single out *ONOK* occurring without *n*. These assumptions lead to the expectation that grammatically-conditioned suppletive alternations in such multifunctional affixes may be across-the-board, or in the head version only (as in Russian), but not limited only to the evaluative/modifier use.

Similarly, when it comes to root suppletion, the inability of evaluative *ONOK* to trigger it could be due to its lacking little *n*. Again, whether this is explanatory depends on other moving pieces in the theory. Bobaljik (2000) contends that root suppletion, as a special case of outwards-sensitive allomorphy, may only be triggered by morphosyntactic features (gender, tense, etc.), which evaluative *-ONOK* lacks.²⁰ If root suppletion could instead also be triggered by morpho-phonological features, suppletion of roots could be generated for both head and non-head contexts—but even this scenario disallows suppletion limited only to the bleached evaluative.

There may, however, be a more interesting reason why a non-head morpheme, like evaluative *-onok*, fails to govern root suppletion within the theory we are developing here: it could be blocked from doing so by intervening category heads. Recall that we assume that roots are uncategorized and require a categorizing head for interpretation. In §2.2.2, we suggested that baby-diminutive *-onok*, as a little *n* head, may combine directly with a root. We used this property to account for (i) root suppletion, (ii) the existence of bound roots such as [op^l-onok] ‘mushroom sp.’, and (iii) lexicalized baby diminutives, such as [masl^l-onok] ‘mushroom sp.’, where the root+diminutive combination has a non-compositional meaning, not related to the independent meaning of the root ([masl-o] ‘oil, butter’—the mushrooms are slimy but they are not babies).

Evaluative *-onok* differs on all of these counts. For example, it does not trigger root suppletion, even for roots that undergo suppletion in the baby-diminutive (recall (47)). No bound roots occur only in evaluative *-onka* form. In general, the evaluative does not appear to combine with bare roots—its bases are obligatorily morphologically complex. They must include a nominalizer that determines their gender. This nominalizer is sometimes null (as in [loʂad^lonka] ‘horse (eval)’) but is often overt, as shown in (42). (Some other examples with overt suffixes in evaluative *-onok* bases were already given in (28).)

(42) Overtly morphologically complex bases for expressive *-onok*

	Base +NOM.SG	Gloss		Eval. dim.	cf.	
a.	star-ux-a	old-EXPR/N	‘old woman’	star-uʂ-onk-a	star	‘old’
b.	izb-uʂ-k-a	log.house-EXP-F	‘log house’	izb-uʂ-onk-a	izb-a	‘log house’
c.	dev-k-a	girl-EXP	‘girl’	dev-tɕ-onk-a	dev-a	‘maiden’
d.	ʂl ^l ap-k-a	hat-DIM	‘hat’	ʂl ^l ap-tɕ-onk-a	ʂl ^l ap-a	‘hat’
e.	trub-k-a	pipe-DIM	‘pipe’	trub-tɕ-onk-a	trub-a	‘pipe’

The evaluative *-onok* here occurs outside other suffixes, including nominalizers and diminutives such as *-ok* (which are usually analyzed as adjuncts—see Wiltschko and Steriopolo 2007; Steriopolo 2008).²¹

If evaluative *-onok* only combines with a categorized structure, we can derive the differences in root-proximity effects, including the minimal contrast in serving as a trigger for root suppletion, as in (43). The structures in (44) show this:

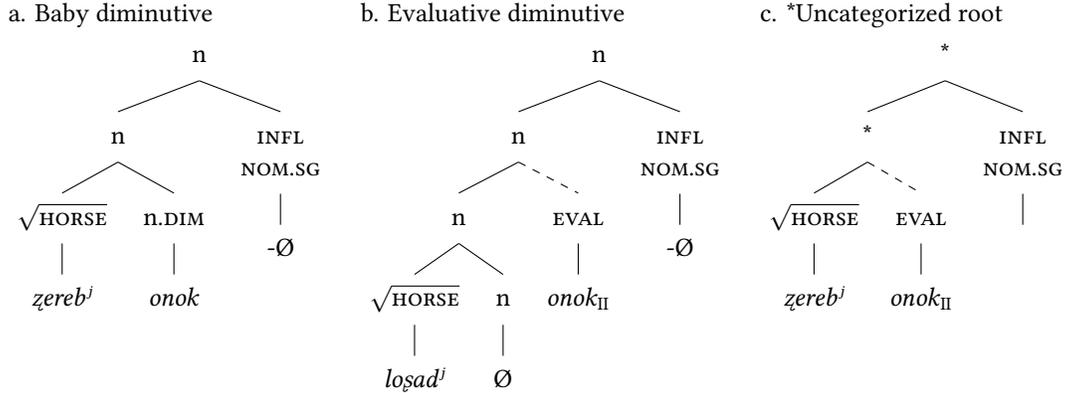
²⁰Unless DIM is a feature, an alternative we raised in §2.2.2. Even then, baby-diminutive *-onok* is alone among Russian diminutives in triggering suppletion. Recall that in our analysis of root suppletion in §2.2.2, the trigger was the combination of little *n* and DIM.

²¹The diminutive *-ok* can both precede and follow *-onok*: /ʂl^lap-ok-onok-ok-a/ [ʂl^laptɕonotɕka] ‘hat DIM, EVAL’, see also §4.

(43) Diminutives of [lɔʂadʲ] ‘horse’

	Sg.	Pl.	
a. Baby	zɛrebʲ-ónok	zɛrebʲ-át-a	‘foal(s)’
b. Evaluative	lɔʂadʲ-ónk-a	lɔʂadʲ-ónk-i	‘horsey/horsies’

(44) Baby and evaluative horse diminutives



If we assume category-defining heads are cyclic in the sense of defining spell-out domains, and that the target and trigger of suppletion must be in the same cycle, then we would have a more principled explanation of the suppletion asymmetry. Since adjuncts do not provide a category for roots, and must therefore occur outside a category-defining head, they will be too remote from the root to trigger root suppletion. While appealing, making this work would, however, require addressing the various arguments in the literature to the effect that the locality domain for suppletion can extend across the first category-defining head.²²

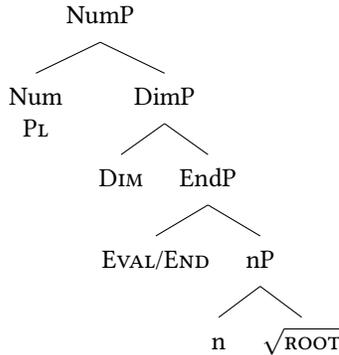
In sum, we conclude that our account is also amenable to treating the difference in suppletion (both as target and trigger) between the two uses of *-onok* as a function of the head versus non-head distinction.

4 Suppletion and locality, some alternatives

The topic of suppletion provides us an opportunity as well to consider what might be a salient alternative to the account we have proposed here. It has been noted that diminutives in some languages come in compositional and lexicalized varieties, which De Belder et al. (2014) suggest correspond to different positions in the structure. Similarly, Cinque (2015) has proposed a cartographic account of evaluative affixes, and argued that size diminutives universally occupy a higher position than evaluative diminutives (Cinque’s labels are *Dim* and *End[earment]*, respectively), even when the two are homophonous:

²²See Embick (2010); Moskal (2015); Bobaljik and Harley (2017) among others, but see also Thornton (2020) for a critical re-assessment of some examples.

(45) Cinque’s proposal (not ours)



We note at the outset that this appears to be directly contradicted by Russian baby diminutives. As we illustrated above in (18), repeated here, all Russian baby-diminutives can be further modified by an evaluative diminutive which occurs peripheral to the size (i.e., baby) diminutive. This is unambiguous in the plural, where the suppletive [-at] is the plural allomorph only for the size diminutive, so there is no question of which affix is correlated with which meaning.²³ We also noted that this pattern is quite productive.

(46) Order of size (baby) and evaluative diminutives in Russian is DIM-EVAL

medvez _z -onok	‘baby bear’	medvez _z -at-a	‘baby bears’
bear-BABY		bear-BABY-PL	
medvez _z -onot _ɕ -ek	‘baby bear (dim)’	medvez _z -at-k-i	‘baby bears (dim)’
bear-BABY-EVAL		bear-BABY-EVAL-PL	

If we suspend, for a moment, our empirical objection to Cinque’s proposal, we could ask whether a simple structural difference (whereby size and evaluative diminutives are both heads, but in different positions) might provide an alternative account of our data. For root suppletion, we appealed to locality in (35)—one might reverse the hierarchical order of morphemes in Cinque’s tree and argue that evaluatives, being demonstrably more peripheral to the root than size diminutives (when they cooccur), are simply too far away to trigger suppletion.

The problem with a cartographic locality account is, as we have noted above, that the suppletion difference applies to -ONOK both as target and trigger. Not only does baby diminutive -onok trigger root suppletion in examples such as the following, it also undergoes suppletion in the context of the plural in the same words, while evaluative -onok does neither.

(47) Diminutives of [lɔʂadʲ] ‘horse’

	Sg.	Pl.	
a. Baby	zerebʲ-ónok	zerebʲ-át-a	‘foal(s)’
b. Evaluative	lɔʂadʲ-ónk-a	lɔʂadʲ-ónk-i	‘horsey/horsies’

Our conclusion therefore is that jiggling with locality will not help—no plausible functional sequence will have the result that the size diminutive is simultaneously higher than the evaluative (and thus closer to the plural) and lower than the evaluative (closer to the root). What the facts appear to show instead is that heads are available to participate as both trigger and target of suppletive alternations, while adjuncts/modifiers are not. Our proposal capitalizes on this difference, though it remains to be seen whether this will generalize to other phenomena.

²³Cinque quotes an observation by Voeykova (1998) that whenever diminutives are stacked, it is the first that takes on the evaluative function, and the second one—the size function. As we have seen already, the productive type of example in (46) is a clear counterexample. One complicating factor that we have already pointed out is that the line between size and evaluative function for some suffixes is rather blurry.

5 Remnants

The preceding sections complete our discussion of the differing behaviors of baby-diminutive and evaluative *-onok* and our analysis of how these may be seen as having a shared component, with the differences mostly derived from the presence or absence of the functional/categorizing element *n*. We now turn to various side issues and loose ends.

5.1 Variable suppletion in pluralia tantum and a few other evaluatives

In §1, we anticipated another argument in favor of a single-morpheme analysis of evaluative and baby diminutives: in a limited set of cases, *-onok* and *-at* freely vary. This variation is noted in descriptive sources such as Shvedova (1980, §428), who characterizes the context as pluralia tantum. Shvedova cites ‘poems’ and ‘money’; we found additional examples shown in (48). The numbers in the two rightmost columns of (48) show corpus counts for the evaluative plurals; as these numbers make clear, the [-onki] plurals are more popular than the [-ata] ones throughout, though some of the differences are small. In addition to these RNC hits, we found internet hits for several *-ata* pluralia tantum that follow the ‘trousers’ pattern, [dzɨnsi]~[dzɨnsʲata] ‘jeans (eval.)’, and [brɨdzɨ]~[brɨdzata] ‘capri pants’ (both loanwords from English).

(48) Pluralia tantum evaluatives

	Base (pl)	Sg?	Gender	Gloss	Eval.	RNC <i>-onk</i>	RNC <i>-at</i>
a.	glaz-á	gláz	M	‘eyes’	glazʲ-ónk-i/-at-a	225	1
b.	vólos-i	vólos	M	‘hair’	volosʲ-ónk-i/-at-a	85	3
c.	stix-í	stíx	M	‘poems’	stiʃ-ónk-i/-at-a	30	22
d.	dénʲg-i	(denʲg-a)	F	‘money’	denʲz-ónk-i/-at-a	260	81
e.	brʲúk-i	—	N/A	‘trousers’	brʲutɕ-ónk-i/-at-a	7	2

Not all of these these nouns are obligatorily plural (the singular of ‘money’ is archaic and marked, but ‘trousers’ and other pants really do lack a singular). But, regardless of the existence of singulars, these *-onki* evaluatives systematically lack singular forms. Thus, for ‘poem’, neither *[stiʃónka] nor *[stiʃónok] are attested singulars.

These patterns raise several questions. First, why do these evaluatives only occur in the plural, given that some of the nouns can occur in the singular? Second, we suggested in §3.3.1 that the evaluative *onok* is not productive on inanimate masculines; do the examples in (48) constitute an exception? Finally, why is the *-at* allomorph possible in these evaluative contexts, when normally it occurs only in baby diminutives (and corresponding baby adjectives, discussed below)?

Our account already offers an answer for the first question: *[stiʃonka] ‘poem (eval.)’ is out for the same reason that inanimate masculines such as *[stolʲonka] ‘table (eval.)’ are out. There is a conflict between the masculine feature of ‘table’ and the Class II declension class of *-onok*. For pluralia tantum that effectively lack singulars, such as the pants nouns, speakers are presumably unable to ascribe gender to the singulars altogether, and the selectivity of evaluative *-onok* excludes obscure feminines such as ‘money’.

On the second question, the well-formedness of pluralia tantum evaluatives is due to a property of Russian that we mentioned in §3.3: all gender distinctions are neutralized in the plural. The usual analysis of this neutralization is Impoverishment (Bonet 1991 et seq.), an operation deleting features before morpheme realization rules apply. If gender features are literally absent in the plural, then there cannot be a conflict between the masculine gender of, say, *glaz* ‘eye’ and *-onok*. No gender features are communicated to the evaluative; it simply receives its Class II specification by the redundancy rule, and this Class II feature determines the realization of the plural as [-i]. This correctly derives the contrast between [glaz-á] ‘eyes’, with its special Ia plural suffix, and [glazʲ-onk-i], with Class II.

The question of variable suppletion is harder to answer, but we speculate²⁴ that this pattern is lexical:

²⁴Another possibility, suggested by the discussion in §3.4, is that the rule for head *onok* is losing ground to a more generic rule where the suppletive allomorph *-at* is conditioned elsewhere. Why this should affect pluralia tantum but not nouns such as ‘skirt’ and ‘horse’ (whose plural evaluatives are always *onok*, not *at*) is not explained in this story, however.

roots such as *stix* ‘poem’ can be nominalized by merging optionally either with a little *n* or with *ONOK*, and in that configuration, *ONOK* receives a special, lexically idiosyncratic interpretation not unlike our mushroom examples (except that here it is the affix and not the root that gets a special interpretation). Since pluralia tantum are already lexically idiosyncratic in favoring or requiring plurality (see, e.g., Acquaviva 2008a, §2.4), it is not a stretch to suggest that they are special in this way, too. This account requires setting up a rule for interpreting {*ONOK*, *n*} as evaluative in the context of a handful of roots such as ‘money’ and ‘poems’. An argument in support of this treatment comes from a handful of other *ata* plurals that are evaluative rather than baby diminutives: [dev-tɕ-at-a] ‘girls’ and [reb¹-at-a] ‘guys’ (see (49)). ‘Girls’ follows a pattern very much like the pluralia tantum examples above, except that it has a singular evaluative. As it is a feminine Class II, this is expected; (49a) is unsurprising. The [reb¹ata] example is an even more clear case: while [reb¹onok] exists, and means ‘child, baby’ in Russian (suggesting *onok* here is a baby dim.), the usual plural of ‘child’ (arguably) involves root suppletion, [dɛti]; the singular form of that root is now archaic and stylistically marked. But the plural of [reb-] has a special interpretation: it does not mean ‘children’, and therefore both the root and the *ONOK* suffix require special interpretation provisions.²⁵

(49) Guys and gals: special evaluative *ata* plurals

a.	devtɕónk-a	‘girl (eval)’	devtɕónki	‘girls (eval)’
b.	*devtɕónok	(intended: baby girl-sg)	devtɕáta	‘girls (eval)’
c.	dit ¹ á	‘child (archaic)’	dɛti	‘children’
d.	reb ¹ ónok	‘child’	reb ¹ áta	‘guys (eval)’

A prediction of this approach to *ata* evaluatives is that merely being a pluralia tantum is not enough to combine with the allomorph, and this seems to be confirmed. Nouns such as [gúb-i] ‘lips’ (sg. [gub-á], Fem. Cl. II) combine with evaluative *onok*, both in the singular and in the plural: [gub¹onka], [gub¹onki] are attested in the RNC. There are no hits for *[gub¹ata], however. Similarly, [zúb-i] ‘teeth’ (sg. [zub], Masc. Cl. Ia) has an evaluative plural [zub¹onki], but no corresponding singular (as predicted by our account) and no *ata* form. This leads to the conclusion that the existence of *ata* evaluatives is not a feature of pluralia tantum (as suggested by Shvedova 1980) but rather a lexical property of certain nouns, which include a couple of pluralia tantum and the mushrooms noted at the outset.

5.1.1 Loose ends: puppies and devilish details

For completeness, we note that there is a small group of baby *-onok* forms that is anomalous as regards the plural [-at] suppletion: [ɕɕenók] ‘puppy’, and two words for devils: [bes¹ónok, tɕert¹ónok]. These nouns are anomalous in that the [-en] is retained in the plural: [ɕɕen¹áta] (not *[ɕɕata]), [bes¹en-át-a, tɕert¹en-át-a].²⁶

(50) Puppy: anomalous phonology and doublets

a.	ɕɕenók	‘puppy (NOM.SG)’	
b.	ɕɕenká	‘puppy (GEN.SG)’	
c.	ɕɕenkí	‘puppies (NOM.PL.)’	RNC: 317 hits
d.	ɕɕen ¹ áta	‘puppies (NOM.PL.)’	RNC: 107 hits
e.	ɕɕen ¹ -ít-sa	‘to whelp, have puppies’	

The plural [ɕɕenkí] is what we would expect if /ɕɕen-/ is the root, with the diminutive suffix /-ók/. The verbal form [ɕɕen¹-ít-sa] ‘to whelp’ (cf. [jagn¹itsa] ‘to lamb’, [zereb¹itsa] ‘to foal’ in (14)) supports

²⁵As it happens, [det-/dit-] also occurs with *at*, but in the singular: [dit¹atko] and [dit¹at¹a], both stylistically marked evaluatives of ‘child’. These forms are likely fossilized from before the *onok* suppletion pattern developed and are anomalous in several ways, so we will not attempt to analyze them.

²⁶Garde (1998, 173) gives these as a complete list of the forms where [-at] replaces [ok] alone, rather than [onok]. The form [ɕɕenók], which is far more frequent in usage than [kut¹onok] ‘puppy’ (1545 hits in the Russian National Corpus for nom.sg vs. 30), is also unique among [onok]~[ata] pairs in having stress on [ók] (and correspondingly orthographic *e* rather than *ě* in the first syllable). Note also that the expected forms [tɕert¹ata], [bes¹ata] ‘little devils’ do exist but are less frequent than the [-en]-extended plurals.

treating [en] as part of the root. But then the *-ata* plural is unexpected given the singular. One explanation for it is that it is based on a misanalysis of the NOM.SG as [çɛn-enók]. (Even this misanalysis requires positing an allomorph of the baby diminutive with final stress, which does not occur elsewhere.) If [çɛn¹-ata] is the plural, we would expect the singular *[çɛn¹-onok] (which does occur in the RNC three times, in what look like jokey or metalinguistic contexts). No matter which way we look at it, the form seems anomalous. But facts like these seem to lend covert support to our analysis of the suffix as internally complex; at least historically, these are cases where affix boundaries have been misanalyzed (see Haspelmath 1995 for many more examples).

5.2 Adjectival and meat -at

This section discusses two additional contexts where *-at* appears, with no connection to plurality: adjectives and meat nouns. Regardless of any historical relationship to the baby *-at* allomorph, in the synchronic grammar, the connection between these uses is tenuous—although for adjectives at least, there is a possible analysis.

The first context where *-at* appears is adjective formation. Russian derivational morphology for adjectives is lexically variable. The adjectives in the “adult” column in (51) are typical, varying in declension class (*-ij*, *-oj*), and in the specific little *a* suffix (*-in*, *-Ø*, *-ov*, *-atɕ*, *-sk*, etc.). Some roots, such as *svin-* ‘pig’, have multiple adjectival forms (*svinoj*, *svinskij*, *svin¹atɕij*). Suppletive roots such as ‘calf/cow’ can form adjectives with a ‘baby’ connotation. In such adjectives, the morpheme between the root and the inflectional ending is always *-atɕ*, a phonologically mutated form of */-at/*. The *-onok* allomorph cannot appear in such baby adjectives (thus, *[tel¹onotɕij] ‘calf (adj)’). But notably, *-atɕ* occurs in some adult adjectives, too, in a lexically determined pattern.

(51) Suppletive baby adjectives formed with *-at(c)*

	Adult	Adult adj	Baby (pl)	Baby adj	
a.	korov-a	korov-ij	tel ¹ -at-a	tel ¹ -atɕ-ij	‘cow/calf’
b.	loşad ¹	loşad-in-ij	zereb ¹ -at-a	zereb ¹ -atɕ-ij	‘horse/foal’
c.	sobak-a	sobatɕ-ij	çɛn ¹ -at-a	çɛn ¹ -atɕ-ij	‘dog/puppy’
d.	svin ¹ -j-a	svin- <i>oj</i> , svin ¹ -atɕ-ij	poros ¹ -at-a	poros ¹ -atɕ-ij	‘pig/piglet’
e.	kur-its-a	kur-in-ij, kur ¹ -atɕ-ij	tsipl ¹ -at-a	tsipl ¹ -atɕ-ij	‘hen/chick’

The pattern for non-suppletive roots is different. As shown in (52), these roots are just as variable in “adult” animal adjective formation, but when they form adjectives with *-at*, the adjectives do not have a baby connotation. For example, ‘bear’ has three adjective forms, in descending order of frequency: [-ij], [-atɕij] and [-onotɕij] (fr. */-onok-ij/*, with mutation). Of these, only the latter has a ‘baby’ connotation (marked with an asterisk because it occurs as a hapax legomenon only, on the internet; this is also true for the other asterisked forms in (52)). The ‘cat’ forms in (d)–(e) are not suppletive in an obvious way, just irregular; the normal ‘feline’ adjective is [koşatɕij], and [kotini¹] means ‘tomcat-adj’; [kot¹ata] ‘kittens’ is for both sexes.

(52) No regular baby adjectives for non-suppletive animal roots

	Animal		baby pl.	Normal adult adj	<i>-atɕ/ -onotɕ?</i>	baby meaning?
a.	koz ¹ ol	‘goat’	koz ¹ -at-a	koz-ij	koz ¹ -atɕ-ij	no
b.	ind ¹ uk	‘turkey’	ind ¹ uş-at-a	ind ¹ uş-in-ij	ind ¹ uş-atɕ-ij	no
c.	l ¹ aguş-k-a	‘frog’	l ¹ aguş-at-a	l ¹ aguş-in-ij	l ¹ aguş-atɕ-ij	no
d.	kot	‘tomcat’	kot ¹ -at-a	kot-in-ij	kot ¹ -atɕ-ij	no
e.	koş-k-a	‘cat’			koş-atɕ-ij	no
f.	medved ¹	‘bear’	medvez ¹ -at-a	medvez ¹ -ij	medvez ¹ -atɕ-ij	no
					medvez ¹ -onotɕ-ij*	yes
g.	ris ¹	‘lynx’	ris ¹ -at-a	ris-ij	ris ¹ -onotɕ-ij*	yes
h.	volk	‘wolf’	voltɕ-at-a	voltɕ-ij	voltɕ-onotɕ-ij*	yes

The crucial observation here is that, unlike in baby nouns, adjectival *-at(c)* is not reliably associated with the baby meaning. It also does not reliably trigger suppletion of roots: [svin¹atɕij] and [poros¹atɕij] ('pig/piglet') are both licit. Thus, a plausible account here is that *-at(c)* spells out the categorizing head *a* in the context of certain roots. This predicts that we should find *-atc* in adjectives that have nothing to do with babies, and we do: [ribatɕij] 'fishing-related' (cf. [riba] 'fish'), [lezatɕij] 'supine' (cf. [lezat¹] 'to lie'). We even see some phonological divergence between the nominal [-at] and the adjectival [-atɕ]: the latter may be optionally unstressed, e.g., [l¹agušátɕij]~[l¹agúsətɕij] 'frog-adj', [košátɕij]~[kóšətɕij] 'cat-adj'.

This still leaves us with a mystery: what conditions root suppletion in the baby adjectives? There is a related puzzle: for many of the suppletive animal roots, the verbs for 'give birth to X' are formed from the same root as the baby noun, much as in English (e.g., [tel¹-it-sa] 'to calve'; see (14) for additional examples). But these verbal forms exist almost exclusively for suppletive roots. With the exception of the verb [kot-it-sa] 'to whelp, give birth to a litter of young', (from [kot] 'tomcat'), used with some other mammals, there are no special verbs (with or without *-onok* or *-at*) for giving birth to baby bears, deer, etc. Whatever is happening with suppletive roots is confined to that set of roots.

Another place where we see *-at* is in 'meat' contexts, but as the examples in (53) show, it is not obvious that this *-at* is the same suffix—at least not synchronically.²⁷ On the one hand, (53a–d) represent a productive pattern. On the other hand, many meat nouns lack *-at* (only *-in* is systematically present). Examples (53e–f) show that many meat nouns are not formed on baby *-at* stems. Crucially, just as with adjectival *-at*, there is no connection between the presence of *-at* and the baby meaning ('veal' is the exception, the only baby meat here).²⁸ This is likely a different, homophonous suffix.

(53) Baby *-at* vs. meat *-at*

	Adult/Generic X		Baby X (pl)	Meat of X	
a.	królik	'rabbit'	krol ¹ tɕ-át-a	krol ¹ tɕ-át-in-a	'rabbit meat'
b.	kengurú	'kangaroo'	kengur ¹ -át-a	kengur ¹ -át-in-a	'kangaroo meat'
c.	bújvol	'buffalo'	bujvol ¹ -át-a	bujvol ¹ -át-in-a	'buffalo meat'
d.	medvéd ¹	'bear'	medvez ¹ -át-a	medvez ¹ -át-in-a	'bear meat'
e.	sobák-a	'dog'	ççen ¹ -át-a	sobatɕ-át-in-a	'dog meat'
f.	koróv-a	'cow'	tel ¹ -át-a	gov ¹ ád-in-a	'beef'
g.				tel ¹ -át-in-a	'veal'
h.	olén ¹	'deer'	olen ¹ -át-a	olen-in-a	'venison'
i.	lóšad ¹	'horse'	zereb ¹ -át-a	kon-in-a	'horse meat' (fr. <i>kon¹</i> 'steed')
j.	svin ¹ -já	'pig'	poros ¹ -át-a	svin-in-a	'pork'
k.	ovts-á	'sheep'	jagn ¹ -át-a	barán-in-a	'mutton' (fr. <i>barán</i> 'ram')
l.	tçelovék	'person'	dét-i (irreg.)	tçelovétɕ-in-a	'human meat'

Russian has other, even more clearly unrelated *-at* suffixes, both native and borrowed (e.g., [borodáv-tɕ-at-ij] 'warty', [velik-ov-át] 'somewhat big', [degener-át] 'degenerate', etc.); this is unsurprising given that a certain amount of homophony is expected.

5.3 Other doublets

Finally, Russian has several other suffixes that alternate between evaluative and head-like function (Steriopolo, 2014). Steriopolo observes that *-icc* can serve as an evaluative augmentative/derogatory or a nominalizing suffix. Evaluatives with *-icc* are for the most part transparently derived from stand-

²⁷We would like to thank Olga Kagan for discussion of these. See Kagan, Erschler, and Geist (in progress) for an analysis of the *-in* suffix.

²⁸Regarding [ovtsa] 'sheep' and [baranina] 'mutton': the expected form for 'lamb' is [jagn¹átina], based on the baby sheep form. This does not appear to be in wide use, although both the RNC and the internet show some hits. Usually lamb is called *m¹aso baras-k-a* 'meat of a lamb-DIM.GEN.'. Alongside [baranina], we also have [ovtç-in-a] 'sheepskin'. This is a case of doublets/triplets, not suppletion.

alone nouns, whose gender they match (including inanimates: see (54b,d,g)). Declension-wise, *-icc* evaluatives are II if feminine, and Ib otherwise:

(54) Augmentative/evaluative *-icc* patterns as an adjunct/modifier

	Base N	Gender	Decl.	Augmentative	Gender	Decl.	
a.	medvéd ^l	M	Ia	medvédiççe	M	Ib	‘bear’
b.	gólos	M	Ia	golosiççe	M	Ib	‘voice’
c.	durák	M	Ia	durátçiççe	M	Ib	‘fool (male)’
d.	vinó	N	Ib	viníççe	N	Ib	‘wine’
e.	strašilo	common	Ib	strašiliççe	common	Ib	‘monster’
f.	sobáka	F	II	sobátçiçça	F	II	‘dog’
g.	píl ^l	F	III	piliçça	F	II	‘dust’
h.	dúra	F	II	dúriçça, duríçça	F	II	‘fool (female)’

On the other hand, the nominalizer/head *-icc* attaches to constituents that may be morphologically complex but are not usually stand-alone words, and the meanings of the resulting nouns are not always transparent. When standalone nouns do exist (as in ‘shooting range’ and ‘shooting’ in (55i)), it is clear that the morpheme assigns its own neuter gender, and its declension class is consistently Ib:

(55) Nominalizer *-icc* patterns as a head (all derived nouns are neuter Ib)

	<i>-iççe</i> Noun	Gloss	Base N?	Gloss
a.	kládbiççe	‘cemetery’	klad-b-	
b.	sokróviççe	‘treasure’	so-kr-ov-	
c.	posméšičçe	‘ridicule’	po-sméx	‘laughter (M Ia)’
d.	túloviççe	‘body, trunk’	tul-ov-	
e.	tčistiliççe	‘purgatory’	tčist-il-	
f.	xraniliççe	‘warehouse’	xran-il-	
g.	pobóičçe	‘battle’	po-bój	‘beating (M Ia)’
h.	zréličçe	‘spectacle’	zr-el-	
i.	strél ^l biççe	‘shooting range’	strel ^l -b-á	‘shooting (F II)’

Steriopolo stops short of claiming that these pieces are morphemes that alternate between head and modifier positions. Could our account be extended to treating *-icc* as a morph with two attachment sites, or are there are two morphemes here? We suspect they are distinct morphemes.

Superficially, this looks like the alternation with *-onok* (modulo suppletion, which *-icc* does not exhibit). If we were to extend the account of *-onok*, it would go like this: when *-icc* expresses a nominalizing head, it is marked as declension class Ib and neuter. It also has an alternate, lexical/modifier incarnation, which is missing the little *n* and neuter gender.

One challenge for this account is to explain where the augmentative meaning comes from. In our analysis of ONOK, the baby/young version was semantically related to the diminutive/evaluative, but this would not work in an obvious way for *-icc*. (The same is true for the other cases Steriopolo discusses, such as *-ok* and *-ets*; the evaluatives do not share any meaning with nominalizers.)

Our account would also need extensions to work for the declension class changes. The declension class of *-icc* is fixed in the nominalizer context but varies in the evaluative context. We could get declension to be fixed by appealing to a null nominalizer head $-\emptyset_{Ib}$, but our account does not predict that declension class should vary in evaluatives, where no such head is present. One could perhaps make something of the fact that declension classes II and Ib have a theme vowel in the nominative, in contrast to Ia and III, which have C-final nominatives. To capitalize on this, suppose that the evaluative $[-içç]$ is only partially specified for declension class (namely as $[+thematic]$), and takes the appropriate thematic declension for the base gender. This is similar to what *-onok* used to do historically (recall (40)), so perhaps this is not without foundation.

But there is a reason to doubt that a reductionist account is even suitable for *-icc*: it is not clear that the evaluative and nominalizing uses are the same phonological entities, as the stress properties

are inconsistent across the examples. In most transparent uses of nominalizing *-icc*, the suffix patterns as recessive-unaccented (using the classification of Melvold 1989). But when used as an evaluative, it sometimes patterns as dominant-accented, meaning it is stressed and causes even lexically accented stems to lose their stresses (one example is [píl'] (accented stem) vs. [píl-icc-a] (stress on suffix). Some of the other suffixes discussed as possible head/modifier alternators by Steriopolo are even more inconsistent; thus, diminutive and nominalizing *-ets/-ts* are treated as distinct affixes by Zaliznjak (1985) in his stress type classification, with the diminutive being consistently pre-stressing and other functions being inconsistent (pp. 82 and 86).²⁹ By comparison, our *-onok* is consistent with respect to stress and other phonological properties, as discussed in §2.1.

In short, we suspect that the homophonous suffixes were once etymologically the same but diverged over time into distinct morphemes, occasionally homophonous but demonstrably distinct in their morphophonology. It is notable that their behaviors are consistent with the adjunct vs. head distinction that we have been exploiting in our analysis, but this is just the nature of the distinction.

6 Conclusion

We have attempted to analyze the baby diminutive and evaluative functions of *-onok* as two faces of the same morpheme. This morpheme is distinguished by being able to serve as either a nominalizing head or as an evaluative adjunct. Our analysis aimed to get most of the action from old morphological assumptions about heads: in particular, the assumption that heads come with their own features rather than passing on the features of structures they dominate, along with the additional proposal that affixes may be internally complex: ‘head’ and evaluative *-onok* share a common lexical element, but in its head guise, the suffix includes a phonologically null categorizing *n* head, absent in the evaluative. This explains why evaluative *-onok* not only has a semantically ‘bleached’ meaning, it also acts as though it lacks features such as gender and is unable to condition suppletion of roots.

The question we are left with is whether this account will generalize to other cases where apparent homophones pattern in dual ways. In morphology, the head/non-head distinction has figured most prominently in the discussion of diminutives and expressives, possibly because they are so salient in being ‘transparent’ for gender features in some languages, and in this stand out from other so-called derivational morphemes. Future work might clarify what it would mean for elements occupying other, non-nominal head positions to merge as adjuncts, and how much mileage can be gotten out of recasting certain homophonous morphemes in the terms we have laid out.

References

- Acquaviva, Paolo. 2008a. *Lexical plurals: A morphosemantic approach*. Oxford, UK: Oxford University Press.
- Acquaviva, Paolo. 2008b. Roots and lexicality in distributed morphology. Ms. (Available on LingBuzz).
- Albright, Adam, and Bruce Hayes. 2003. Rules vs. analogy in English past tenses: A computational/experimental study. *Cognition* 90:119–161.
- Alderete, John. 2003. Structural disparities in Navajo word domains: A case for lex-cat faithfulness. *The Linguistic Review* 20:111–158.
- Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language and Linguistic Theory* 21:737–778.

²⁹Marvin (2002) and Bachrach and Wagner (2007) explore the intriguing possibility that stress differences could be due to the head/adjunct distinction or similar structural differences, but this analysis cannot be extended to the Russian examples because the patterns are the exact opposite of what would be expected from structural/cyclicity considerations: the adjunct diminutive *-ok* is stress-dominant in masculines, whereas the head feminine suffix is recessive and systematically unstressed. See Gouskova and Linzen (2015) for more discussion.

- Aronoff, Mark, and Frank Anshen. 2001. Morphology and the lexicon: Lexicalization and productivity. In *The handbook of morphology*, ed. Andrew Spencer and Arnold M. Zwicky, 237–247. Wiley Online Library.
- Baayen, Harald, and Rochelle Lieber. 1991. Productivity and English derivation: A corpus-based study. *Linguistics* 801–843.
- Bachrach, Asaf, and Michael Wagner. 2007. Syntactically driven cyclicity vs. output-output correspondence: The case of adjunction in diminutive morphology. Ms. MIT & Cornell University. URL <http://ling.auf.net/lingbuzz/000383>.
- Bethin, Christina Y. 2012. On paradigm uniformity and contrast in Russian vowel reduction. *Natural Language & Linguistic Theory* 30:425–463.
- Bobaljik, Jonathan. 2000. The ins and outs of contextual allomorphy. In *University of Maryland working papers in linguistics*, ed. K. K. Grohmann and Caro Struijke, volume 10, 35–71. College Park, MD: University of Maryland.
- Bobaljik, Jonathan. 2012. *Universals in comparative morphology*. Cambridge, MA: MIT Press.
- Bobaljik, Jonathan David, and Heidi Harley. 2017. Suppletion is local: Evidence from Hiaki. In *The structure of words at the interfaces*, ed. Heather Newell, Máire Noonan, Glyne Piggott, and Lisa deMena Travis, 141–159. Oxford: Oxford University Press.
- Bonet, M. Eulalia. 1991. Morphology after Syntax: Pronominal Clitics in Romance. Doctoral Dissertation, MIT, Cambridge, MA.
- Borer, Hagit. 2003. Exo-skeletal vs. endo-skeletal explanations: Syntactic projections and the lexicon. In *The nature of explanation in linguistic theory*, ed. John Moore and Maria Polinsky, 31–67. CSLI Publications.
- Božič, Jurij. 2019. Constraining long-distance allomorphy. *The Linguistic Review* 36:485–505.
- Brown, Lea, and Matthew S Dryer. 2008. Diminutive as an inflectional category in Walman. Ms. URL <https://www.acsu.buffalo.edu/~dryer/BrownDryerWalmanDimin.pdf>.
- Bybee, Joan. 1995. Regular morphology and the lexicon. *Language and Cognitive Processes* 10:425–455.
- Choi, Jaehoon, and Heidi Harley. 2019. Locality domains and morphological rules. *Natural Language & Linguistic Theory* 37:1319–1365.
- Christopoulos, Christos, and Roberto Petrosino. 2018. Greek root allomorphy without spans. In *Proceedings of the 35th West Coast Conference on Formal Linguistics*, ed. William Bennett, L. Hrats, and D.R. Storoshenko, 151–160. Somerville, MA: Cascadilla.
- Cinque, Guglielmo. 2015. Augmentative, pejorative, diminutive and endearing heads in the extended nominal projection. In *Structures, strategies and beyond: Studies in honour of Adriana Belletti*, 67–82. Philadelphia: John Benjamins.
- Corbett, Greville G. 1982. Gender in Russian: An account of gender specification and its relationship to declension. *Russian linguistics* 197–232.
- Corbett, Greville G. 2007. Canonical Typology, Suppletion, and Possible Words. *Language* 8–42.
- Corbett, Greville G, and Sebastian Fedden. 2016. Canonical gender. *Journal of linguistics* 52:495.
- Creemers, Ava, Jan Don, and Paula Fenger. 2018. Some affixes are roots, others are heads. *Natural Language & Linguistic Theory* 36:45–84.

- De Belder, Marijke. 2011. Roots and affixes: Eliminating lexical categories from syntax. Doctoral dissertation, Utrecht University.
- De Belder, Marijke, and Jeroen van Craenenbroeck. 2015. How to merge a root. *Linguistic Inquiry* 46:625–655.
- De Belder, Marijke, Noam Faust, and Nicola Lampitelli. 2014. On a low and a high diminutive: Evidence from Italian and Hebrew. In *The syntax of roots and the roots of syntax*, ed. Artemis Alexiadou, Hagit Borer, and Florian Schaefer, volume 149, 163. Oxford University Press.
- Dressler, Wolfgang U., and Lavinia Merlin Barbaresi. 1994. *Morphopragmatics: Diminutives and intensifiers in Italian, German, and other languages*. Berlin: Mouton de Gruyter.
- Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge, MA: MIT Press.
- Faltýnková, Michaela, and Markéta Ziková. 2019. How to grill a chicken (in the nanosyntactic oven). In *The unpublished manuscript*, ed. Pavel Caha, Karen de Clercq, and Guido Vanden Wyngaerd, 63–80. Lingbuzz. URL <https://ling.auf.net/lingbuzz/003993>.
- Ganenkov, Dmitry. 2019. Missing elsewhere: Domain extension in contextual allomorphy. *Linguistic Inquiry* 1–14.
- Garde, Paul. 1998. *Grammaire russe: phonologie et morphologie*. Paris: Institute études slaves, 2 edition.
- Gilbert, Madeline. 2021. Acoustic evidence for affix classes: A case study of Brazilian Portuguese. *Glossa* 6.
- Gouskova, Maria, and Jonathan David Bobaljik. to appear. Allomorphy and vocabulary insertion. In *Handbook of Distributed Morphology*, ed. Artemis Alexiadou, Ruth Kramer, Alec Marantz, and Isabel Ultra-Massuet. Cambridge University Press.
- Gouskova, Maria, Sofya Kasyanenko, and Luiza Newlin-Łukowicz. 2015. Selectional restrictions as phonotactics over sublexicons. *Lingua* 167:41–81. URL <http://ling.auf.net/lingbuzz/002673>.
- Gouskova, Maria, and Tal Linzen. 2015. Morphological conditioning of phonological regularization. *The Linguistic Review* 32:427–473.
- Halle, Morris. 1994. The Russian declension: An illustration of the theory of Distributed Morphology. In *Perspectives in Phonology*, ed. Jennifer Cole and Charles Kisseberth, 29–60. Stanford: CSLI Publications.
- Halle, Morris, and Alec Marantz. 1993. Distributed Morphology. In *The View from Building 20. Essays in Honor of Sylvain Bromberger*, ed. Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, MA: MIT Press.
- Harley, Heidi, and Mercedes Tubino Blanco. 2013. Cycles, vocabulary items and stem forms in Hiaki. In *Distributed morphology today: Morphemes for Morris Halle*, ed. Ora Matushansky and Alec Marantz, 117–134. Cambridge: MIT Press.
- Haspelmath, Martin. 1995. The growth of affixes in morphological reanalysis. *Yearbook of morphology 1994* 1–29.
- Hippisley, Andrew. 1996. Russian expressive derivation: A network morphology account. *The Slavonic and East European Review* 74:201–222.

- Kastner, Itamar, and Beata Moskal, ed. 2018. *Snippets 34: Special issue on non-local contextual allomorphy*. Milano, Italy: LED online – Electronic archive. URL <https://www.ledonline.it/snippets/allegati/snippets34000.pdf>.
- Körtvélyessy, Livia. 2015. *Evaluative morphology from a cross-linguistic perspective*. Cambridge Scholars Publishing.
- Kramer, Ruth. 2015. *The morphosyntax of gender*, volume 58. Oxford University Press.
- Lieber, Rochelle. 1980. On the organization of the lexicon. Doctoral Dissertation, MIT, Cambridge, MA.
- Lieber, Rochelle. 1992. *Deconstructing morphology: Word formation in syntactic theory*. University of Chicago Press.
- Lightner, Theodore. 1965. Segmental phonology of Modern Standard Russian. Doctoral Dissertation, MIT, Cambridge, MA.
- Lomonosov, MiKhail V. 1755. *Rossiiskaja grammatika*. Sankt Peterburg: Imp. Akad. nauk.
- Lowenstamm, Jean. 2015. Derivational affixes as roots, no exponence: Phasal spellout meets English stress shift. In *The syntax of roots and the roots of syntax*, ed. Artemis Alexiadou, Hagit Borer, and Florian Schafer, 230–258. Oxford: Oxford University Press.
- Marantz, Alec. 1996. ‘Cat’ as a phrasal idiom. Ms. MIT, Cambridge, Mass.
- Marvin, Tatjana. 2002. Topics in the stress and syntax of words. Doctoral Dissertation, MIT, Cambridge, MA.
- Matushansky, Ora. 2013. Gender confusion. In *Diagnosing syntax*, ed. Lisa L.-S. Cheng and Norbert Corver, 271–294. Oxford: Oxford University Press.
- McConnell-Ginet, Sally. 2014. Gender and its relation to sex: The myth of ‘natural’ gender. In *The expression of gender*, ed. Greville G. Corbett, 3–38. Berlin: de Gruyter.
- McDonough, Joyce. 2003. *The Navajo sound system*, volume 55 of *Studies in Natural Language and Linguistic Theory*. Dordrecht: Kluwer.
- Mel’čuk, Igor A. 1994. Suppletion: Toward a logical analysis of the concept. *Studies in Language* 18:339–410.
- Melvold, Janis. 1989. Structure and stress in the phonology of Russian. Doctoral Dissertation, MIT, Cambridge, MA.
- Merchant, Jason. To appear. How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry*.
- Moskal, Beata. 2015. A case study in nominal suppletion. *Linguistic Inquiry* 46:376–387.
- Moskal, Beata, and Peter W. Smith. 2016. Towards a theory without adjacency: Hyper-contextual VI-rules. *Morphology* 26:295–312.
- Pesetsky, David. 2013. *Russian case morphology and the syntactic categories*. Cambridge, MA: MIT Press.
- Polivanova, Anna K. 1967. Obrazovanie umen’shitel’nyx suschestvitel’nyx muzhskogo roda. In *Russkij jazyk v natsional’noj shkole*. Reprinted in Anna K. Polivanova, 2008. *Obschee russkoe jazykoznanie: Izbrannye raboty*, volume 4, 8–22. Moscow: RGGU.
- Saito, Hiroaki. 2021. Grammaticalization as decategorization. *Journal of Historical Syntax* 5:1–24.

- Scalise, Sergio. 1988. The notion of 'head' in morphology. In *Yearbook of morphology* 1, 229–246. Springer.
- Selkirk, Elisabeth. 1982. *The Syntax of Words*. Cambridge, MA: MIT Press.
- Shvedova, Natalia Y. 1980. *Russkaja grammatika [Russian grammar]*. Moscow: Academy of Sciences USSR.
- Steriopolo, Olga. 2008. Form and function of expressive morphology: a case study of Russian. Doctoral Dissertation, University of British Columbia, Vancouver, BC.
- Steriopolo, Olga. 2014. Parameters of Variation in the Syntax of Homophones. *Poljarnyj vestnik* 17:46–73.
- Steriopolo, Olga. 2017. Nominalizing evaluative suffixes in Russian: The interaction of declension class, gender, and animacy. *Poljarnyj vestnik* 20:18–44.
- Thornton, Abigail. 2020. Morphophonological & morphosyntactic domains. Ph.D. dissertation, University of Connecticut.
- Timberlake, Alan. 2004. *A reference grammar of Russian*. Cambridge: Cambridge University Press.
- Trubachev, Oleg Nikolaevich. 1960. *Proisxozhdenie nazvanij domashnix zivotnyx v slavianskix jazykax [the origin of domestic animals' names in the Slavic languages]*. Moscow: Akademia Nauk SSSR.
- Vasmer, Max. 1958. *Russisches etymologisches Wörterbuch [Russian etymological dictionary]*. Heidelberg: C. Winter.
- Voeykova, Maria D. 1998. Acquisition of diminutives by a Russian child: Preliminary observations in connection with the early adjectives. In *Studies in the acquisition of number and diminutive marking*, ed. Steven Gillis, Antwerp Papers in Linguistics 95, 97–113. University of Antwerp. URL <http://webhost.ua.ac.be/apil/apil95/diminutives1.pdf>.
- Williams, Edwin. 1981. On the notions 'lexically related' and 'head of a word'. *Linguistic Inquiry* 12:245–274.
- Wiltschko, Martina. 2009. $\sqrt{\quad}$ root incorporation: Evidence from lexical suffixes in Halkomelem Salish. *Lingua* 119:199–223.
- Wiltschko, Martina, and Olga Steriopolo. 2007. Parameters of variation in the syntax of diminutives. In *Proceedings of the 2007 Canadian Linguistics Association Annual Conference*. Canadian Linguistic Association.
- Zaliznjak, Andrej Anatoljevich. 1977. *Grammatičeskij slovar' russkogo jazyka. [A grammatical dictionary of the Russian language]*. Moscow: Russkij Jazyk.
- Zaliznjak, Andrej Anatoljevich. 1985. *Ot praslavjanskoj akcentuacii k russkoj. [From Proto-Slavic to Russian accentuation.]*. Moscow: Nauka.