Ora Matushansky, SFL (CNRS/Université Paris-8/UPL)

email: ora.matushansky@cnrs.fr

homepage: http://www.trees-and-lambdas.info/matushansky/

AFFIX CONGLUTINATION AS ALLOSEMY IN A COMPLEX AFFIX

Formal Diachronic Semantics (FoDS) 9, November 28-29, 2024

1 INTRODUCTION

Research question: semantic processes in **affix conglutination** (Haspelmath 1995):

 $\llbracket \sqrt{-X_{\text{SUFF}}} - Y_{\text{SUFF}} \rrbracket = \llbracket Y_{\text{SUFF}} \rrbracket (\llbracket \sqrt{\rrbracket})$

The phenomenon of semantically vacuous intermediate suffixes is very widespread

Plénat and Roché 2004, Plénat 2005: diminutive "interfixes" in French:

- tarte 'cake' → tartelette 'tartlet' (cf. boule 'ball' → boulette 'meatball, pellet') (2) a.
 - nappe 'tablecloth' → napperon 'doily' (cf. blouse 'blouse' → blouson 'jacket') b.
 - brique 'brick' → briquetier 'bricklayer' (cf. pot 'pot' → potier 'potter') c.

Russian adjectivizers often involve suffix doubling (cf. -ic-al):

- (3) kardiólog/*kardiologik 'cardiologist' → kardiological' cardiological' Russian kardiologika 'cardiology'
 - b. xirurgi/*xirurgik 'surgeon' → xirurgi/českij 'surgical' xirurgia/*xirurgika 'surgery'

This suffixal complex can only combine with non-native bases

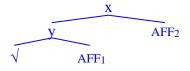
Traditional Russian grammars, Agapova 1974 via Zvezdova and Gou 2013; Haspelmath 1995, citing Kiparsky 1975; Itkin and Leont'eva 2019: new simplex suffix -telĭn-:

- $osnov_{a}^{i}t^{j}$ 'to found' $\rightarrow osnov_{a}^{i}tel^{j}$ 'founder' $\rightarrow osnov_{a}^{i}tel^{j}nij$ 'substantial' $star_{a}^{i}t^{j}s^{j}a$ 'to try hard' $\rightarrow star_{a}^{i}tel^{j}$ 'prospector' $\rightarrow star_{a}^{i}tel^{j}n$ -ij 'assiduous' (4)
 - b.

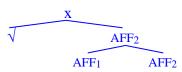
Haspelmath 1995, Grestenberger and Kastner 2022: Modern Greek verbalizer -ev-, originally derived from the combination of the agentive suffix -eu- and the verbalizer *-je/o-

Proposal: creation of a new suffix from two others requires the creation of a complex suffix

iterative suffixation **(5)**



b. complex suffix



The creation of a complex suffix requires semantic deletion

2 THE SECRET AGENT IN -TEL^j-ĬN-

2.1 Dramatis personae: -tel- and -in-

Adjectivizing suffix -in- (surface [en]/[n]): "pure categorizer", no discernable lexical meaning beyond adjective formation:

(6) a. pɨl^j 'dust'

b.

- $p_i^i l^j n_i i$ 'dusty.MSG'
- kompiúter 'computer' **(7)** a.
 - kompiuter-n-ij 'computer-ADJ-MSG' b.

Non-deverbal (see Section 6.4), productive

On the use of -in- with verbal bases see below

"Pure categorizer" means the outcome is a "property linked to N":

- programmnij 'programmatic, program' (8)
 - kuljturnij 'cultural, cultured, cultivated' b.
 - vernij 'faithful' (from vera 'faith, belief')
- (9) $[-in-] = \lambda x_k \cdot \lambda P$. P has something to do with x_k

Agentive suffix -tel^j-: strictly deverbal, falls under the External Argument Generalization of Levin and Rappaport Hovav 1988 and Rappaport Hovav and Levin 1992:

```
(10) a.
                   l<sup>j</sup>ubi-t<sup>j</sup> 'love-INF'
                                                                     (11) a.
                                                                                         vɨkl<sup>j</sup>učá-t<sup>j</sup> 'turn off.IMPFV-INF'
         b.
                   l'ubi-tel 'an amateur'
                                                                                         vikl<sup>j</sup>učá-tel<sup>j</sup> 'a light switch'
                                                                               h.
```

In productive uses can be restated as "one who Vs", ambiguous between actor and instrument interpretation; this ambiguity seems to be systematic across languages (Rainer 2015):

```
(12) \llbracket -tel^{j} - \rrbracket = \lambda \mathbf{P} \cdot \lambda \mathbf{x} \cdot \text{Gen}(e^{i}) \cdot \llbracket \mathbf{P}(\mathbf{x})(e^{i}) \rrbracket
                                                                                                                                                                                                                           after Olsen 2019 for -er
```

An agentive noun can serve as a basis for an apparently transparent adjective-formation:

```
muči-telj
(13) a.
              muči-t<sup>j</sup>
                                          b.
                                                                           c.
                                                                                  muči-tel<sup>j</sup>-n-ij
                                                                                  torture-AGT-ADJ-MSG
              torture-INF
                                                 torture-AGT
              to torture
                                                 torturer
                                                                                  poignant, agonizing
```

Impressionistically, most -telin- adjectives are agentive

Affix telescoping and conglutination

The interpretation of a sequence of suffixes need not be compositional

Affix telescoping (Haspelmath 1995): semantically transparent derivation with a missing step:

```
* opravda-tel<sup>j</sup>
                                                                                 opravda-telj-n-ij
(14) a.
              opravda-t<sup>j</sup>
              acquit-INF
                                                 acquit-AGT
                                                                                 acquit-AGT-ADJ-MSG
              to acquit
                                                                                 acquitting
```

Most agentive -telin- adjectives lack a corresponding noun

Sometimes the noun is present but cannot be the base for the adjective:

- $izbir\dot{a}t^{j}$ 'to elect' $\rightarrow izbir\dot{a}tel^{j}$ 'elector, voter' (15) a.
 - izbiráteľnij 'electoral, election (attr.), voting' \approx 'related to voting/election' b.
 - izbiratelⁱnij učastok 'polling station' c.
 - d. *izbiratel*^j*nij b*^j*ulleten*^j 'voting form'

The adjective is semantically linked to the verb rather than to the intermediate noun

Affix conglutination (Haspelmath 1995): "affix reanalysis in which an inner affix and an outer affix are combined [...] Semantically, the new conglutinated affix is not different from the original outer affix'

Terminology: Stump 2022 calls the cases where the historical change is complete (only the complex is productive, and its former parts are not) affix telescoping; Haspelmath 1995 reserves this term for cases with a missing link

In affix conglutination the intermediate affix is semantically vacuous

Affix conglutination as allosemy in a complex affix (November 28-29, 2024)

Marantz 2013, Wood 2015: **allosemy** (i.e., semantic allomorphy)

2.3 A brief history of -tel-in-

Agapova 1974 via Zvezdova and Gou 2013, Itkin and Leont'eva 2019: adjectives without the intermediate noun already by the 11th century:

3

Demidov and Kamchatnov 2020: the existence of -teli-in- adverbs without corresponding adjectives suggests that short forms with the gerundive meaning should be regarded as primary

- (16) a. volitel^jnij 'by choice' (11th c., *volitel^j)
 - b. vozveščatelinij 'demanding, announcing' (16th c., *vozveščateli)

Agapova 1974 via Zvezdova and Gou 2013: derivation from the verbal stem in the 11th-14th c. Non-agentive use in the 19th century:

(17) stojal, ožidaja s zamirajuščim serdcem postupi-tel^j-n-ogo èkzamena stood awaiting with sinking heart admit-TEL-ADJ-SG.GEN exam stood waiting for admittance exam with a sinking heart (Aleksey Pisemsky, 1858)

Zvezdova and Gou 2013: these adjectives are derived directly from the verbal stem

Lopatin and Uluxanov 2016:653-657: at least six allosemes, including "intended for V", "the object of V", and "the state of V", direct derivation from the verbal stem

Important: the suffix -teli- remained agentive throughout

Both -tel'- and -ĭn- remain productive, and are recognizable as parts of -tel'-ĭn-

2.4 Where is the agentivity?

Puzzle: the loss of agentivity at the intermediate step appears to be conditioned by both the root and the adjectivizing suffix and **only inside the adjective**:

Paykin 2003:181 after Markov 1984: instrument-denoting -teli- nouns may combine with the suffix -ščik- to yield corresponding agents (e.g., osvetiteli 'lighting appliance, or person in charge of lighting effects') → osvetiteliščik 'person in charge of lighting effects'). Is this another case of -teli- bleaching?

- (18) a. predstavl^jat^j 'to represent.IMPFV.INF' (from the unattested perfective *predstavit^j* 'to imagine, present')
 - b. predstavitel^j 'representative'
 - c. predstavitelinij 'representative; impressive, dignified'
 - d. predstavitelistvo 'representation'

The loss of agentivity at the intermediate step is not obligatory

3 COMPLEX AFFIX FORMATION

Proposal: two potential structures for a sequence of suffixes:

(19) a. **iterative suffixation**



complex suffix

The two adjectival interpretations in (18c) correspond to the two structures, respectively

Ora Matushansky

4

Affix conglutination as allosemy in a complex affix (November 28-29, 2024)

Structure of the argument:

- complex suffixes are not excluded by the grammar
- this constituency imposes constraints on the interpretation
- > types of semantic deletion
- > reanalysis

3.1 Semantic clash in a complex suffix

The **agentive suffix** -tel'- is deverbal and creates agentive nouns

The adjectivizing suffix -in- cannot combine with thematic verbal stems

The constituent formed by the two suffixes is redundant and incoherent:

- redundancy: -*in* is a pure categorizer returning the property of being related to the base stem (-*teli* is far more specific, returning the kind characterized as the external argument of the base event)
- incoherence: -tel^j- returns a kind, -ĭn-, a property

In the general case, one suffix in a complex suffix structure must be semantically null

Two options: actual deletion (a process) or postulating a null alloseme

My preference is for the former: (a) deletion is a process attested on the PF side; (b) the distribution of semantically null affixes seems to be predictable; (c) the null alloseme would also have to have come from somewhere, (d) too many other suffixes would have to have a null alloseme

Empirically, it is always the inner suffix that is semantically null

3.2 C-selection or s-selection?

The agentive suffix -tel- is deverbal and creates agentive nouns

The complex suffix -tel^j-ĭn- is deverbal and creates adjectives

The deverbal nature of -tel-i is semantically motivated

Until it becomes semantically null

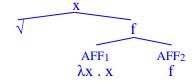
Since -*ĭn*- is a pure categorizer, -*tel^j*-*ĭn*- will also be one, no motivation for semantic constraints on the base

Two possible ways of semantic composition in a branching structure (Heim and Kratzer 1998):

- function application: one of the nodes applies to the other
- predicate modification: the two nodes form a conjunction

Combined with semantic deletion:

(20) a. **function application**



b. **predicate modification**



If the restrictions on the base of AFF₁ are encoded as presuppositions, they cannot be projected in (20a); c-selection must be assumed

In (20b) only the presuppositions remain, selection can be semantic

No evidence for choosing on the basis of -tel^j-ĭn-

But complex suffix formation may also give rise to novel meanings

5

4 Intermediate summary

The agentive semantics of the suffix *-teli-* can be lost in adjectival derivation (Haspelmath's **affix conglutination**)

This loss is not obligatory, there exist doublets, as in (18c):

Though such doublets can always be attributed to polysemy, either of the base stem or of the derivate

- (21) a. predstavitel^jnij 'representative'
 - b. predstavitelinij 'impressive, dignified'

Proposal: formation of a complex suffix and obligatory semantic deletion inside it

Agentive and non-agentive readings of -teli-in- adjectives correspond to different structures

Semantic deletion may correspond to

- (a) replacement with an identity function, retention of c-selectional properties
- (b) replacement with a constant and retention of presuppositions

The latter option can also be implemented as copying of the scope of the λ -operator of AFF₂ to AFF₁ with retention of the restriction of AFF₁ but copying is known to be computationally suspicious

No basis for deciding between these options

Additional benefits: **counterpotentiation** (Haspelmath 1995, Stump 2022):

- (22) a. cyclic, historic
 - b. *whimsic, nonsensic
 - c. whimsical, nonsensical

In the suffixal complex $-tel^{j}$ - $\check{t}n$ - the inner suffix $(-tel^{j}$ -) overcomes the selectional restrictions of the suffix $-\check{t}n$ - (see Section 6.3)

5 THE SMALLNESS OF -JONUK-

Gouskova and Bobaljik 2022: the suffix -*jonŭk* can be both a head and a modifier G&B transcribe the suffix as -*onok*- and note that it palatalizes the preceding consonant, sometimes with mutation

It is a head when forming baby diminutives (from all genders and declension classes into the same masculine default):

- (23) a. ris^j lynx _{III}.NOM_{FSG} lynx
- b. risi-onok/risi-ata lynx-ONOK.NOM_{MSG}/-ONOK.NOM_{PL} baby lynx/baby lynxes
- (24) a. zver^j animal _I.NOM_{FSG} animal
- b. zver^j-onok/zver^j-ata animal-ONOK.NOM_{MSG}/-ONOK.NOM_{PL} baby animal/baby animals
- (25) a. kris-a b. krisi-onok/ata rat _{II}-NOM_{FSG} rat b. krisi-onok/ata rat-onok.NOM_{MSG}/-onok.NOM_{PL} baby rat/baby rats

Historically a suffixal complex, consisting of an **adjectivizer** (the same -in-, "pure categorizer" with the semantics in (9)) and the diminutive suffix (underlyingly -ik-)

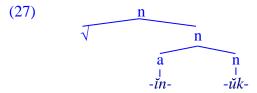
Affix conglutination as allosemy in a complex affix (November 28-29, 2024)

Iterative affixation should produce the wrong result:

- (26) a. $[-in-] = \lambda x_k \cdot \lambda P \cdot P$ has something to do with x_k
 - b. $[-\check{u}k-] = \lambda f \cdot \lambda x \cdot f(x) & x \text{ is small}$
 - c. $[-\check{u}k-]([-\check{i}n-]([[lynx]])) = \lambda x$. x has a lynx-related property P and x is small

6

To the extent that a diminutive suffix can apply to a property, the outcome is questionable Suppose now that the two suffixes form a constituent:



The inner adjectivizing suffix undergoes semantic deletion but the presupposition that its inner argument is a kind (λx_k is shorthand for λx : x is a kind) remains:

(28)
$$\llbracket -\check{u}k - \rrbracket (\emptyset (\llbracket lynx \rrbracket)) = \lambda x_k \cdot x_k \text{ is a sub-kind of lynx and } x_k \text{ is small }$$

Complex suffix formation and subsequent semantic deletion are a prerequisite for reanalysis Is -*Jonŭk*- synchronically decomposable and if yes, what is the role of the adjectivizing suffix?

5.1 The facets of -in-

Proposal: -*in*- introduces the presupposition that the inner argument of the complex suffix is an animate kind

The sub-kind interpretation is due to coercion (independently available for kind denotations in the context of a modifier)

Evidence: the animal adjectivizer -in-:

On the homophonous possessive suffix -in- see section below

- (29) a. gus^j/gus^ja 'goose.NOM/GEN'
 - b. gus^jónok 'baby goose'
 - c. gus^jinij 'related to geese.MSG'

The adjectivizer -in- is not attested elsewhere

Zaliznjak 1977:371-372: 33 adjectives in -in-ij-, of which 2 are not derived from animal names (gostinij 'related to guests', only used in the set expression Gostinij Dvor 'arcade' or as the substantivized feminine noun gostinaja 'living room', and topolinij from tópoli 'poplar')

Both the "animal" suffix -in- and the baby diminutive -ionŭk- are accented and dominant

```
    (30) a. lósosi/losósi 'salmon' → lososinij 'salmon (attr.)', ??lososiónok 'baby salmon'
    b. múxa 'fly' → mušínij 'fly (attr.), ??mušónok 'baby fly'
```

The correlation between the "animal" -in- and the baby diminutive -ionŭk- suggests a common core, supported by their accentuation

The "animal" -*in*- has to have a restriction on its use limiting it to animate kinds Not all animal names form adjectives in -*in*- (there might be blocking)

Phonologically, the "animal" -in- is a [+ATR] variant of the adjectivizer -in-

7

Another potential case of yer tensing in one and the same suffix passing from noun (surface [k]/[ok]) to adjective (surface [ič]): dvojka 'a two'/dvoičnyj 'binary (in numeration systems)', des/atka 'a ten'/des/atičnij 'decimal', etc. (And I would argue for -ik- as the underlying representation in both cases on independent grounds)

I would argue for a complex structure for both -in- and -ionŭk-, at least historically. Today the two suffixes might be independent

5.2 **Suffixal suppletion**

The plural form of baby diminutives is suppletive:

(31) a. risj-onok b. risj-ata lynx-ONOK.NOM_{MSG} lynx-ONOK.NOMPL baby lynx baby lynxes

(32) a. zver^j-onok b. zver^j-ata animal-ONOK.NOM_{MSG} animal-ONOK.NOMPL baby animal baby animals

(33) a. kris-jonok b. krisj-ata rat-ONOK.NOM_{MSG} rat-ONOK.NOMPL baby rat baby rats

There is no apparent link between the singular (-ionŭk-) and the plural (-iat-) forms of the baby diminutive

Unless its underlying representation contains -*in*-

Historically, the tautosyllabic iN combination in Russian underwent nasalization:

(34) a. $[iN]_{\sigma} \rightarrow [\tilde{\epsilon}] \rightarrow [a]$ front vowel $[oN]_{\sigma} \rightarrow [\tilde{o}] \rightarrow [u]$ b. back vowel

The morphologically restricted [iN]/[a] alternation is attested in modern Russian:

(35) a. vrémja/vrémeni/vremjón 'time.NOM/GEN=DAT=LOC/INS'

sém^ja/sémeni/sem^ján 'seed.NOM/GEN=DAT=LOC/INS' b.

ditiá/ditiáti 'child.NOM/GEN=DAT=LOC'

(36) athematic verbal stem -mĭn- 'knead' (and a few others)

razo.mn/-o-t 'mash-PRES-3SG' a.

pre-vocalic

razmia-ti 'mash-INF' b.

pre-consonantal

razminat^j 'mash.IMPFV.INF' c.

after tensing, pre-vocalic

If baby diminutives are derived by a complex suffix (-in-ik- in the singular, -in-t- in the plural), the surface -jat- arises from the same process

5.3 The iterative counterpart of -jonŭk-

The same suffix can form evaluative diminutives:

(37) a. lošadj b. lošad^j-onk-a/lošad^j-onk-i/*lošad^j-at-a horse-ONOK-NOMFSG/-ONOK-NOMPL horse III.NOMFSG horse nag/nags

The derivate inherits the gender of the stem; plural is not suppletive

Hypothesis: here the inner suffix -in- does not retain its presuppositions \rightarrow no kind reading

Affix conglutination as allosemy in a complex affix (November 28-29, 2024)

6 CONCLUSIONS AND FURTHER QUESTIONS

Complex suffixes are useful for:

- **affix conglutination** (Haspelmath 1995): systematic optional semantic deletion of one suffix in the context of another
 - semantic deletion would be obligatory in such a structure due to type clashes and incoherence; surface ambiguity can be explained by the simultaneous availability of two structures

8

> semantic enrichment and new suffix formation: in function of the retention of the presuppositions of the inner suffix

Complex suffixes per se are expected to happen, the novelty is in the semantic deletion

Semantic deletion is also attested, both synchronically and diachronically (theme suffixes are probably the epitome of this)

Complex suffix formation can be driven by paradigmatic pressures (especially in feminitives)

6.1 Hypothetical chronology of affix conglutination

Precondition: iterative suffixation (with transparent meaning)

First step: a double derivative acquires special meaning lacking the agentive component but still linked to the verb (e.g., *rassuditelinij* 'calm, wise' from *rassuditi* 'to judge wisely'):

- The structure might still be iterative, this is lexically conditioned semantic deletion (in the context of a given root and the outer suffix)
- A semantically vacuous suffix is transparent for special meaning (cf. allomorphic transparency of phonologically null affixes)

Generalization (probably very soon): the inner suffix can form a constituent with the outer suffix (affix conglutination):

- the agentive meaning of the inner suffix is deleted
- if its presuppositions are kept, the complex suffix acquires a semantically enriched meaning compared to the outer suffix (-ionŭk-)
- otherwise the meaning of the complex suffix is identical to that of the outer suffix (-tel^j-ĭn-)

Reanalysis (probably with some help from phonology): a new suffix is born!

Open question: where does affix telescoping fit in?

My hypothesis: it proceeds in parallel with affix conglutination, as the combination of the two suffixes becomes productive

6.2 On complex feminitives

In contemporary Russian feminization is done by adding a suffix or by substituting one:

- (38) a. sekretárša 'secretary', generáliša 'general's wife', blógerša 'blogger'
 - b. laborántka 'lab assistant', zemľáčka 'compatriot'
 - c. baronéssa 'baroness', kritikéssa 'critic'
 - d. masterica 'master', tigrica 'tigress'
 - e. knⁱag<u>in</u>a 'princess', filologina 'pholologist'

- f. trusixa 'coward', borčixa 'wrestler', zajčixa 'hare'
- direktrisa 'director', abbatisa 'abbess' g.
- svátia 'mother of the child-in-law', boltún a 'chatterbox' h.
- piárščik/piárščica 'PR administrator.M/F' (39) a.
 - animéšnik/animéšnica 'animé lover.M/F'

For the "substituting" suffixes to work, they need to complex

The complex feminitive -nic-F 6.3

The suffixal complex *-nic-* forms feminitives for *-tel^j-* nouns:

(40) učiteli/učitelinica 'a teacher', voditeli/voditelinica 'a driver', voiteli/voitelinica 'a warrior', roditeli/roditelinica 'a parent'

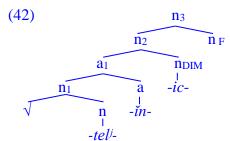
The suffixal complex -nic- is the feminine variant of the agentive/nominalizing suffix -nik-:

- animésnik/animésnica 'animé lover.M/F' (41) a.
 - $otstupit^{j}$ 'to renounce' $\rightarrow otstupnik/otstupnica$ 'renegade' b.

It is a suffixal complex:

- the same adjectivizing suffix -*in*-
- the diminutive/nominalizing suffix -ik-
- [feminine] (possibly with suprasegmental accentual feature, Matushansky 2023a)
- [animate] (probably fused with [feminine])

How are these feminitives formed? Suppose only iterative suffixation is available:



How is -tel^j- interpreted in this structure?

The interpretation of feminine [telinic] nouns should depend on the interpretation of the corresponding [tel^jn] adjective

And [telin] adjectives come in two varieties: the agentive ones and the underspecified ones

It becomes a pure accident that all [-tel^jnic] nouns denote female counterparts of [-tel^j] nouns

We know that the suffix -*in*- can affect the interpretation of -*teli*-, so it should do so even when followed by the feminitive -ic-

And the feminitive -ic- is never unpaired: among the 1062 animate feminine nouns in [ica] in Zaliznjak 2010 the only non-paired ones I have found are diminutives and animal and insect

Possible objection: can -nic- not contain -in- synchronically? Answer: yes, it can. But this is rather unintuitive and misses a number of empirical generalizations (see Matushansky 2023b)

6.4 On the c-selectional properties of the suffix -*in*-

The suffix -*in*- can combine with verbs:

Vinogradov 1952:346-347: there exist a few deverbal -*in*- adjectives (*bérežnij* 'careful' (*beréči* 'to protect'), *prijátnij* 'pleasant' (*prijáti* 'to accept (arch.)'), *grebnój* 'rowing' (*gresti* 'to row'), etc.)

Thus empirically, the adjectivizing suffix -in- cannot combine with thematic verbal stems

Hypothesis: this is not a hard-wired restriction, either semantic or syntactic, this is blocking

The **passive past participle suffix** *-en-* is historically identical to -in- (and might still be -in- in the underlying representation) but never surfaces as such (its vowel never alternates, it is either zero or [e]):

```
    (43) a. čit- a- n- a  ← čit-a-ĭn/ĕn-a + hiatus resolution? read TH PPP FSG
    b. kup l- ĕn- a  ← kup-i-ĕn-a + glide formation buy TH PPP FSG
```

If an adjective was formed with the suffix -*in*- from a thematic verb, this adjective would be indistinguishable from a passive past participle

Hence **counter-potentiation**

7 REFERENCES

Agapova, G.V. [Zvezdova, G.V.]. 1974. К проблеме становления сложных суффиксов [On the problem of complex suffix establishment]. Doctoral dissertation, Saratov State University.

Demidov, Dmitrii G., and Alexander M. Kamchatnov. 2020. Причастодетие и его роль в русском историческом словообразовании [Prichastodetie (Gerundivum) and its role in the Russian historical word formation]. Древняя Русь. Вопросы медиевистики [Old Russia. The Questions of Middle Ages] 80(2), 98-111. https://doi.org/10.25986/IRI.2020.80.2.007.

Gouskova, Maria, and Jonathan David Bobaljik. 2022. The lexical core of a complex functional affix: Russian baby diminutive *-onok. Natural Language & Linguistic Theory* 40(4), 1075-1115. https://doi.org/10.1007/s11049-021-09530-1.

Grestenberger, Laura, and Itamar Kastner. 2022. Directionality in cross-categorial derivations. *Glossa: a journal of general linguistics* 2022(7(1)). https://doi.org/10.16995/glossa.8710.

Haspelmath, Martin. 1995. The growth of affixes in morphological reanalysis. In *Yearbook of Morphology 1994*, ed. by Geert Booij and Jaap van Marle, 1–29. Dordrecht: Kluwer.

Heim, Irene, and Angelika Kratzer. 1998. Semantics in Generative Grammar. Oxford: Blackwell.

Itkin, Ilja B., and Anna L. Leont'eva. 2019. Морфологические и семантические особенности русских прилагательных с суффиксом -тельн- в синхронии и диахронии [Morphological and semantic peculiarities of Russian adjectives with the suffix -tel'n- in synchrony and diachrony]. Paper presented at VI конференция «Русский язык: конструкционные и лексико-семантические подходы» [The 6th conference "The Russian language: constructionist and lexical-semantic approaches"], Saint-Petersburg, October 3–5, 2019.

Kiparsky, Valentin. 1975. Russische historische Grammatik. Band Ill. Entwicklung des Wortschatzes. Heidelberg: Winter.

Levin, Beth, and Malka Rappaport Hovav. 1988. Non-event -er nominals: A probe into argument structure. *Linguistics* 26, 1067–1083.

- Lopatin, V. V., and I. S. Uluxanov. 2016. Словарь словообразовательных аффиксов современного русского языка [Dictionary of derivational affixes of Modern Russian]. Moscow: Russian Academy of Sciences.
- Marantz, Alec. 2013. Locality domains for contextual allomorphy across the interfaces. In *Distributed Morphology Today: Morphemes for Morris Halle*, ed. by Ora Matushansky and Alec Marantz, 95–115. Cambridge, Massachusetts: MIT Press.
- Markov, V.M. 1984. *Русское семантическое словообразование [Russian semantic word formation]*. Izhevsk: Udmurt State University.
- Matushansky, Ora. 2021. Russian nominalizations as a window on the verbal theme. Paper presented at *OTiPL Colloquium*, Moscow State University, November 24, 2021.
- Matushansky, Ora. 2023a. On the complexity of becoming feminine in Russian. Humboldt-Universität zu Berlin, May 3, 2023.
- Matushansky, Ora. 2023b. Suffixal complexes and semantic deletion. In MorrisHalle@100. MIT.
- Olsen, Susan. 2019. The instrumental -er suffix. In *Of Trees and Birds. A Festschrift for Gisbert Fanselow*, ed. by J.M.M. Brown, Andreas Schmidt and Marta Wierzba, 3–14. Potsdam: University Press Potsdam. https://doi.org/10.25932/publishup-43060.
- Paykin, Katia. 2003. Deverbal nouns in Russian: in search of a dividing line. In *Contrastive Analysis in Language: Identifying Linguistic Units of Comparison*, ed. by Dominique Willems, Bart Defrancq, Timothy Colleman and Dirk Noël, 172-193. London: Palgrave Macmillan UK. https://doi.org/10.1057/9780230524637_8.
- Plénat, Marc. 2005. Rosinette, cousinette, starlinette, chipinette. Décalage, infixation et épenthèse devant -ette. In Questions de classification en linguistique: méthodes et descriptions. Mélanges offerts au Professeur Christian Molinier, ed. by Injoo Choï-Jonin, Myriam Bras, Anne Dagnac and Magali Rouquier, 275-298. Berne: Peter Lang.
- Plénat, Marc, and Michel Roché. 2004. Entre morphologie et phonologie : la suffixation décalée. In *Lexique*, ed. by Danielle Corbin and Martine Temple, 159-198.
- Rainer, Franz. 2015. Agent and instrument nouns. Word-Formation: An International Handbook of the Languages of Europe. Berlin/Boston: De Gruyter Mouton, 1304–1316.
- Rappaport Hovav, Malka, and Beth Levin. 1992. -*Er* nominals: implications for a theory of argument structure. In *Syntax and the Lexicon*, ed. by Tim Stowell and Eric Wehrli, 127–153. New York: Academic Press.
- Stump, Gregory. 2022. Rule combination, potentiation, affix telescoping. In *Morphological Diversity and Linguistic Cognition*, ed. by Adam Ussishkin, Andrea D. Sims, Jeff Parker and Samantha Wray, 282–306. Cambridge: Cambridge University Press. https://doi.org/10.1017/9781108807951.011.
- Vinogradov, V. V. ed. 1952. Грамматика русского языка [The Grammar of the Russian Language]. Moscow: Soviet Academy of Sciences.
- Wood, Jim. 2015. Icelandic morphosyntax and argument structure. New York: Springer.
- Zaliznjak, A. A. 1977. Грамматический словарь русского языка [Grammatical Dictionary of Russian Language]. Moscow: Izdatel'stvo Russkij Jazyk.
- Zaliznjak, A. A. 2010. Грамматический словарь русского языка [Grammatical Dictionary of Russian Language]. Moscow: AST.
- Zvezdova, G.V., and Xuetao Gou. 2013. Словообразовательная динамика в группе прилагательных на *-тельн* (на материале словарей современного русского языка) [Word-formation dynamics in the group of adjectives in *-tel'n* (on the basis of dictionaries of Contemporary Russian)]. *Обрії сучасної лінгвістики [Frontiers of modern linguistics]* 4, 40–45, http://nbuv.gov.ua/UJRN/obsl_2013_4_8.