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Reduplication in Russian verbs and adjectives: motivating form with morphosyntactic constraints

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In this paper, I argue that the Russian verbal suffix *-iva* and the adjectival suffix *-Vj(V)* result from a unique morphological process. To this end, I point out that *-iva* and *-Vj(V)* are complex items where *-i-* and *-j-* (respectively) play an unclear role. As a first step, I focus on the representation of *-iva*. I take up the hypothesis of Coats (1974) where *-iva* is assumed to be the reduplication of an imperfectivizing suffix *-(v)a*. Second, I show that *-Vj(V)* results from a similar phenomenon: it involves the repetition of a gender suffix. From this perspective, both *-i-* and *-j-* are conditioned by a reduplication process. Finally, I propose a derivation of these segments based on an identity avoidance constraint. I argue that these are realizations of an *expletive root* \sqrt{I} licensing sequences of two identical syntactic heads.

Keywords: Russian; reduplication; imperfective; long adjectives; Distributed Morphology

1 Introduction

In this paper, I propose an analysis of two different Russian suffixes: i. the imperfectivizing suffix *-iva*; and ii. the *long adjectives* suffix *-Vj(V)*.¹ The main concern of this paper is the motivation of the segments *-i-* and *-j-*, found in *-iva* and *-Vj(V)* respectively. There are good reasons to believe that these segments do not belong to the underlying representation, do not have any semantic content, and are not phonologically predictable. Hence the following question: what motivates their insertion? My aim is to show how the theory is able to unify and motivate these unexpected segments. I base my analysis on the assumption (defended in Coats 1974; Feinberg 1980; Enguehard 2015a) that the suffix *-iva* results from a reduplication process.² Extending this analysis to the structure of *-Vj(V)*, I show that one can motivate the occurrence of *-i-* and *-j-* from the morphosyntactic structure. I suggest that these segments occupy a sort of *parasitic* node inserted in order to avoid an ill-formed sequence of adjacent identical heads.

Section 2 is devoted to the introduction of data. I point out that *-iva* and *-Vj(V)* are complex items with *-i-* and *-j-* having an unclear morphological status. Based on hypotheses proposed in Garde (1972), Coats (1974) and Feinberg (1980), I argue in Section 3 that the occurrence of *-i-* and *-j-* can be predicted from morphological organization. More specifically, focusing on the underlying representation of *-iva*, I suggest that *-i-* is conditioned

¹ For the needs of this paper, I use a romanization of the Russian orthography for citation forms. Indeed, unstressed vowels often undergo a neutralization that makes it difficult (and sometimes impossible) to determine their accurate phonological identity. However, when the vowel reduction is relevant, I give the phonetic transcription (in square brackets). Finally, the phonological transcription is given in slashes.

² I follow the terminology of Coats (1974) and Feinberg (1980), who first proposed a *reduplication* analysis of the suffix *-iva*. These interpret this “reduplication” as a morphological doubling (in the sense of Inkelas & Zoll 2005), not as an output process (like e.g. in McCarthy & Prince 1995).

by the doubling of a categorial head. In Section 4, I make a proposal concerning the derivation of *-i-* and *-j-*: I assume an identity avoidance constraint banning repetition of a node without a linking element. Accordingly, I propose that *-i-* and *-j-* are realizations of an *expletive root* that licenses such sequences of identical nodes.

My argumentation is based on a version of Distributed Morphology (Halle & Marantz 1993) developed in Lowenstamm (2012, 2013, 2014). The principles used are shown in (1).

- (1)
- a. Words are built in syntax.
 - b. Affixes can be roots too.
 - c. Roots can select another root, a categorial head, or both.
 - d. *Phase Impenetrability Condition* (PIC v.1, Chomsky 1998): “For strong phase HP with head H: the domain of H is not accessible to operations outside HP; only H and its edge are accessible to operations. The edge being the residue outside of H-bar, either SPECs or elements adjoined to HP”.

The postulates in (1b–c) are not directly crucial for the analysis presented in this paper. However, they are relevant for the notion of *expletive root* introduced in Section 4.1, and for the retention of PIC v1 (1d) (see Lowenstamm 2012 for an alternative to the restatement of PIC proposed in Embick 2010).

Finally, the analysis defended in this paper is derived from an analysis of Russian morphophonology, proposed in Enguehard (2015a, 2016), which follows the basic principles of Mirror Theory (Brody 2000). Even though these principles are not directly relevant here, I chose to maintain them for sake of consistency with the previous work. For readers unfamiliar with this framework, a brief reminder is provided in the appendix.

2 Data and issues

In this section, I introduce: i. the morphology of Russian *Secondary Imperfective verbs* (Section 2.1); and ii. the morphology of Russian *Long Adjectives* (Section 2.2). I point out that both involve a segment (*-i-* and *-j-* respectively) with an unclear morphological status.

2.1 Secondary Imperfective

In Russian, verbal aspect is morphologically expressed. Perfective and imperfective verbs are derived as follows (see Karcevskij 1927: 87).³ First, unprefixated verbs are usually imperfective (first column of (2)) (Garde 1980: 379). Perfective verbs can be derived from these by prefixation (second column of (2)).⁴ Compared to its stem, the resulting perfective verb can have: i. the same lexical meaning (2a); or ii. a new lexical meaning (2b).

(2)	<i>Imperfective</i>	<i>Gloss</i>	<i>Perfective</i>	<i>Gloss</i>
a.	móg-Ø-t' [l'mɔtɕʲ]	'to be able'	s-móg-Ø-t' [l'smɔtɕʲ]	'to be able'
	pis-á-t'	'to write'	na-pis-á-t'	'to write'
	zvon-í-t'	'to call'	po-zvon-í-t'	'to call'
b.	móg-Ø-t' [l'mɔtɕʲ]	'to be able'	po-móg-Ø-t' [pɐl'mɔtɕʲ]	'to help'
	pis-á-t'	'to write'	za-pis-á-t'	'to record'
	zvon-í-t'	'to call'	pere-zvon-í-t'	'to call again'

³ On the surface, Russian infinitive verbs have the structure (p-)v-vs-t', where: i. p- is one or more prefixes; ii. -vs is a verbal suffix (including -Ø); and iii. -t' is an infinitive marker.

⁴ The form of the prefix varies, depending on the stem and the targeted meaning.

The perfective verbs with a new meaning (second column of (2b)) have no imperfective counterpart yet. As a consequence, a new imperfective form (called Secondary Imperfective) can be derived with one of the two imperfectivizing suffixes: *-a* or *-iva* (Garde 1980: 385–386). Secondary Imperfective verbs in (3a) are derived with *-a*; and Secondary Imperfective verbs in (3b) are derived with *-iva* (or its variant *-yva*).

(3)	<i>Perfective</i>	<i>Secondary Imperfective</i>	<i>Gloss</i>
a.	po-móg-Ø-t' [pΛ ¹ mɔtɕ ^j] ob-sud-í-t' pri-výk-nu-t'	po-mog-á-t' ob-sužd-á-t' pri-vyk-á-t'	'to help' 'to discuss' 'to get used to'
b.	pere-zvon-í-t' za-pis-á-t' za-pryg-nú-t' pro-vétr-i-t'	pere-zván-iva-t' za-pís-yva-t' za-prýg-iva-t' pro-vétr-iva-t'	'to recall' 'to record' 'to jump' 'to aerate'

I focus on the underlying representations of *-a* and *-iva* in Sections 2.1.1 and 2.1.2 respectively.

2.1.1 *-a*

The suffix *-a* shows two surface forms that are in complementary distribution: i. *-a*; and ii. *-va*. The form *-a* occurs after a consonant (4a) and the form *-va* occurs after a vowel (4b) (Garde 1980: 384; §583). The representation of this suffix is crucial to address the representation of *-iva*.

(4)	<i>Perfective</i>	<i>Secondary Imperfective</i>	<i>Gloss</i>
a.	po-móg-Ø-t' [pΛ ¹ mɔtɕ ^j] ob-sud-í-t' s-léz-Ø-t'	po-mog-á-t' ob-sužd-á-t' s-lez-á-t'	'to help' 'to discuss' 'to climb down'
b.	za-kry-Ø-t' na-dú-Ø-t' u-zná-Ø-t'	za-kry-vá-t' na-du-vá-t' u-zna-vá-t'	'to close' 'to blow' 'to learn'

A popular hypothesis, proposed in Flier (1972) and developed in Flier (1974) and Coats (1974) (among others), implies that the representation of *-a* and *-va* is /-aj/. Flier argues that /v/ is not a part of the suffix, but the mutation of a last root consonant /j/ (e.g. /na-duj-á-tʲ/ → *na-duv-á-t'* 'to blow'). Moreover, he assumes, following Jakobson (1948), that this suffix ends with a consonant /j/ that surfaces in present and imperative forms (e.g. *na-duv-áj-u* 'I blow', *na-duv-áj* 'blow!').

A competing (less popular) analysis was simultaneously proposed in Garde (1972: 254, 386). Conversely, Garde argues that /v/ is not a part of the root, but a part of the suffix which surfaces after a vowel (i.e. *na-du-vá-t'*). For this purpose, he points out that *j* → *v* is not phonologically predictable (e.g. there is no *j* → *v* in *vlij-á-t'* 'to influence'): it requires an idiosyncratic property of some lexical items in order to apply.

Flier and Coats do not deny the idiosyncrasy of *j* → *v*. They assume this rule to be conditioned by morphological features (see Flier 1972: 247; Coats 1974: 38–40). Accordingly, it must be emphasized that the respective analyses of Flier (1972) and Garde (1972) do not compete on the same field: they depend on two different approaches. Flier assumes that phonology can be conditioned by morphological features. Garde assumes that phonology is conditioned by phonotactics only. The present paper is in the latter vein. Accordingly, I follow Garde (1972) in assuming that *-a* and *-va* are realizations of /-va/.

In order to account for the distribution of *-a* and *-va*, I propose an analysis in the CVCV framework introduced in Lowenstamm (1996). I suggest that the alternation between *-a* and *-va* is due to a skeletal position that is available either for the last root consonant or for /v/. Such a constraint can be represented as follows. Final root consonants are (always) floating segments that associate to a skeletal unit provided by the category.⁵ When a root shows a final floating consonant, this can link to the following C position (and /v/ cannot surface) (5a). If a root does not show any final consonant, the C position that precedes /a/ is available for /v/ (it can surface) (5b).

- (5) a. *po-mog-á-t'* ‘to help’
- | | | | | | | | | | | |
|---|---|---|---|---|---|---|-----|---|---|----|
| C | V | + | C | V | + | C | V | + | C | V |
| | | | | | | | | | | |
| p | o | | m | o | | g | (v) | | a | tʃ |
- b. *na-du-vá-t'* ‘to blow’
- | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|---|
| C | V | + | C | V | + | C | V | + | C | V |
| | | | | | | | | | | |
| n | a | | d | u | | v | a | | tʃ | |

Anecdotally, the reader has certainly noticed that, unlike the proposal of Flier (1972) (i.e. /-aj/), this representation does not include the consonant /j/ found in the present and imperative forms. Garde (1972) argues that this consonant is epenthetic. He is not the only author to suggest that /j/ is not a part of the suffix. Alternatively, Micklesen (1972) assumes that it is a separate marker. I reserve judgment between these analyses,⁶ but I follow both authors in excluding /j/ from the representation of /-va/.

2.1.2 -iva

I now turn to the representation of *-iva*. This suffix can be realized as [ivə] (6a) or [iv̩] (6b). The vowels [i] and [i̩] are in complementary distribution in Russian (Avanesov 1968: 38, §8). The former occurs after a *soft* consonant and the latter occurs after a *hard* consonant. I thus follow Halle (1963), Jakobson (1966), Townsend (1975: 134–141) and Garde (1980) (among others) in assuming that they are allophones of /i/.

(6)	<i>Perfective</i>	<i>Secondary Imperfective</i>	<i>Gloss</i>
a.	<i>pere-zvon-í-t'</i>	<i>pere-zván-iva-t'</i> [-ivə]	‘to recall’
	<i>pro-vétr-i-t'</i>	<i>pro-vétr-iva-t'</i> [-ivə]	‘to aerate’
	<i>pri-tašč-í-t'</i>	<i>pri-tásk-iva-t'</i> [-ivə]	‘to drag’
b.	<i>za-pis-á-t'</i>	<i>za-pís-yva-t'</i> [-iv̩]	‘to record’
	<i>ras-kol-ó-t'</i>	<i>ras-kál-yva-t'</i> [-iv̩]	‘to split’
	<i>pro-gl'ad-é-t'</i>	<i>pro-gl'ád-yva-t'</i> [-iv̩]	‘to overlook’

One can notice that the two imperfectivizing suffixes (i.e. *-(v)a* and *-iva*) share a common string: *-va*. In order to account for this similarity, Flier (1972), Coats (1974), Feinberg (1980), Matushanky (2009) and more recently Gribanova (2015) (among others) assume that *-iva* is a complex item that includes the suffix *-(v)a*. Thus, *-iva* can be parsed into *-i-* and *-va*.⁷ But the question is: what is the morphological function of *-i-*?

Flier (1972) argues that *-i-* is the genuine imperfective marker of Secondary Imperfective verbs ending with *-iva*. Accordingly, he analyzes *-va* as a “theme suffix”. As a consequence,

⁵ A similar analysis was proposed in Lampitelli and Luo (2014) for Italian.

⁶ This issue is beyond the scope of this analysis and deserves to be discussed in another paper.

⁷ The underlying representations chosen in the mentioned papers are /-iv-/ and /-aj/.

in Secondary Imperfective verbs ending with $-(v)a$ as well (see (4)), the imperfective marker is not $-(v)a$ but a hypothetical $-\emptyset$ - marker (Flier 1972: 243).

However, I suggest that it is empirically dubious to assume that $-(v)a$ and $-iva$ express the *same* semantic feature by means of what distinguishes them phonologically (i.e. $-i$ and $-\emptyset$ -) rather than by means of what they have in common (i.e. $-(v)a$). I thus propose another working hypothesis: $-(v)a$ is *always* an imperfectivizing suffix and the role of $-i$ still needs to be defined. This hypothesis resonates with the etymology of $-iva$ proposed in Meillet (1902; 1924: 303, §326), Mazon (1908: 60) and Kuznecov (1959: 188–189) (among others). These assume that $-iva$ results from a reanalysis of $-va$ after a root ending with a vowel i/y (i.e. $/i/$) (e.g. *za-kry-va-t'* ‘to close’ > **-yva**). Accordingly, the enigmatic status of $-i$ is not only a synchronic issue, but also a diachronic fact.

2.2 Long Adjectives

Before analyzing the status of $-i$ in $-iva$, I discuss another case of morphological item with no clear status, this time in the realm of adjectival inflection.

Russian shows two adjectival forms: *Short Adjectives* (SA) and *Long Adjectives* (LA).⁸ Schematically, Short Adjectives end with $-(V)$ and (nominative) Long Adjectives end with $-Vj(V)$, where V are vowels that vary depending on gender and number features. Examples are given in Table 1.

The phonetic realization of SA suffixes is illustrated in Table 2. The phonological representation of each suffix can be deduced from its realization in stressed context (i.e. where vowels are not reduced).

The realizations of LA suffixes are given in Table 3. The phonological representation of the vowels that precede $-j$ can generally be deduced from their realization in stressed context. The only exception is the vowel of the masculine suffix $-\acute{o}j/-ij$: $[i]$ is not an expected realization of $/o/$ in unstressed context (Avanesov 1968: §13.2). Thus the representation of this suffix is ambiguous (I leave this issue aside for the moment). It is $/-\acute{o}j/$ or $/-ij/$

Table 1: Examples of SA and LA with the root *nov-* ‘new’.

	SG			PL
	M	F	N	
Short form	nóv- \emptyset	nóv- a	nóv- o	nóv- y
Long form	nóv- yj	nóv- aja	nóv- oje	nóv- yje

Table 2: Pronunciation of SA suffixes.

Orthography	Phonetics				Phonology
	stressed		unstressed		
	after a hard consonant	after a soft consonant	after a hard consonant	after a soft consonant	
$-\emptyset$ (M.SG)	\emptyset				$/-\emptyset/$
$-a$ (F.SG)	$[-^a]$		$[-\text{ə}]$		$/-a/$
$-o, -e$ (N.SG)	$[-^o]$		$[-\text{ə}]$		$/-o/$
$-i, -y$ (PL)	$[-^i]$	$[-^i]$	$[-i]$	$[-i]$	$/-i/$

⁸ The semantic motivation of this contrast is irrelevant to the issues under consideration here (see Section 5 for some details).

depending on the accentual context. Except the case of masculine *-ój/-ij*, the vowels that precede *-j-* are identical to those found in SA suffixes (compare Table 2).

The representation of vowels that follow *-j-* (i.e. [ə] and [i]) is trickier to determine because these are never stressed. Due to vowel reduction, [ə] can be the realization of /o/ or /a/, and [i] can be the realization of /i/ or /e/ (see Avanesov 1968: 64–67, §18.3–18.5). Thus, the phonological quality of these vowels cannot be deduced from their realization. However, if we look to the accusative counterpart of *-aja* (e.g. *nóv-uju* ‘new-F.SG.ACC’), we can observe that both vowels in *-aja* are replaced by *u*. Given that *-u* is an accusative marker that always alternates with a nominative marker *-a* in adjectives and nouns (see Garde 1980 for paradigms), it can be supposed that the feminine suffix *-aja* is made of two *-a* markers (i.e. /-aja/). Inductively, it can now be assumed that the neuter suffix *-oje/-eje* is also made of two *-o* markers (i.e. /-ojo/), and the plural suffix *-ije* is made of two *-i* markers (i.e. /-iji/).⁹

In sum, the vowels that surround *-j-* are the same gender/number markers that are found in Short Adjectives. Thus, it is reasonable to parse *-Vj(V)* into *-V₁-j-V₂*, where *-V₁-* and *-V₂* are gender/number markers and *-j-* is an LA marker (see Table 4 for illustration).¹⁰ Note that the masculine suffix is the only suffix that does not show the same marker on the left and on the right of *-j-*. I will return to this issue in Section 4.

My main concern is the morphological status of the LA marker *-j-*. Etymologically, *-j-* was a clitic expressing a definite value in Old Slavic (Vaillant 1948: §79). As such, it was followed by its own gender/number marker. But, in Modern Russian, the definite value of *-j-* disappeared and the long form of adjectives came to be unmarked (Comtet 1997: 136). In this context, it is dubious to analyze *-j-* as a clitic. As a consequence, the following question arises: how to account for the fact that a *non-clitic -j-* involves its own gender/number marker?

Table 3: Pronunciation of LA suffixes (based on Avanesov 1968: §18, §84, §86–87).

Orthography	Phonetics				Phonology
	stressed		unstressed		
	after a hard consonant	after a soft consonant	after a hard consonant	after a soft consonant	
-ij, -yj, -oj (M.SG)	[-'ɔ]		[-ij]	[-ij]	/-ój/ or /-ij/ ?
-aja (F.SG)	[-'ajə]		[-əjə]		/-aja/
-oje, -eje (N.SG)	[-'ɔjə]		[-əjə]		/-ojo/
-ije, -yje (PL)	[-'ii]	[-'ii]	[-ii]	[-ii]	/-iji/

Table 4: Internal structure of LA suffixes.

	V ₁	LA marker	V ₂
M.SG	/-ó/ or /-i/	/-j-/	/-∅/
F.SG	/-a/	/-j-/	/-a/
N.SG	/-o/	/-j-/	/-o/
PL	/-i/	/-j-/	/-i/

⁹ The presence of /j/ in plural *-ije* is attested in careful speech (Avanesov 1968: §86).

¹⁰ It is worth to mention that Halle & Matushansky (2006: 368–369) suppose that *-Vj(V)* is made of two items only: an adjectivizing suffix *-Vj* and a gender/number marker *-V*. The vowel of *-Vj* copies the following nucleus via a readjustment rule. This analysis avoids the issue mentioned in this paper. However, it relies on a theoretical process that is not confirmed by independent cases of vowel harmony in Russian.

To conclude this section, I pointed out that *-iva* and LA suffixes can be parsed into *-i-va* and $-V_1-j-V_2$ respectively, with *-i-* and *-j-* having an enigmatic morphological status. The following sections aim to puzzle out this issue. I show that the insertion of *-i-* and *-j-* are motivated by the morphosyntactic context.

3 Predictability of *-i-* and *-j-*

In this section, I introduce two attempts to derive *-i-* and *-j-* from their respective contexts: i. the Epenthesis Hypothesis of Garde (1972) about the status of *-j-*; and ii. the Reduplication Hypothesis of Coats (1974) and Feinberg (1980) about the status of *-i-*. These hypotheses imply that *-i-* and *-j-* are predictable. Thus, they should not be represented in the underlying form. My aim is to point out that this predictability relies on morphosyntactic structure, not on phonological properties.

3.1 *-j-* and the Epenthesis Hypothesis (Garde 1972)

Garde (1972) proposes to analyze *-j-* as an epenthetic consonant. He bases his hypothesis on the following observation: hiatuses are never found in Russian endings (Garde 1972: 473). Thus, he argues that the occurrence of *-j-* in *-aja* (as well as in other endings) could be due to a repair mechanism in hiatus contexts ((7); Garde 1972: 375).

(7) /nóv-a-a/ → nóvaja ‘new-F’

This process relies on phonological information. However, Garde (1972) argues that the occurrence of an epenthetic /j/ is not limited to hiatuses. As an example, /j/ also occurs in the final position of the masculine counterpart of (7), see (8). Here, the emergence of /j/ does not seem to result from a hiatus. Thus, Garde (1972: 378–380) needs to define a second condition for epenthesis, namely that /j/ also surfaces between a final vowel and a zero morpheme (we saw in Table 4 that *-ój/-ij* involves a $-\emptyset$ marker). In other terms, Garde introduces morphological structure into his analysis.

(8) /nóv-i- \emptyset / → nóvyj ‘new-M’

Garde’s analysis implies that the occurrence of *-j-* can be predicted from its context. Thus, it should not be included in the lexical representation. But he also mentions (Garde 1972: 378) that an epenthesis conditioned by a zero marker does not result from phonology only. Something should be said about the relation between the motivation of *-j-* and the morphosyntactic structure. The issue is not developed in Garde’s analysis. In this paper, I propose that the insertion of *-j-* is motivated by an identity avoidance constraint. But before moving on to my proposal (Section 4), I address the hypothesis of Coats (1974) and Feinberg (1980) about the status of *-i-*.

3.2 *-i-* and the Reduplication Hypothesis (Coats 1974; Feinberg 1980)

Most previous proposals suppose that *-i-* is the realization of a new lexical item that distinguishes *-iva* from $-(v)a$: e.g. /-iv/ in Flier (1972) or /-u/ in Matushansky (2009). These studies fundamentally assume that this component is not predictable.

A competing view was introduced in Coats (1974) and later developed in Feinberg (1980). These argue that *-iva* is a sequence of two $-(v)a$ suffixes (Coats 1974: 35–36; Feinberg 1980: 149–152).¹¹

¹¹ Unlike the present paper, the authors of these studies assume that the underlying representation of $-(v)a$ is /-aj/. Thus, the sequence of two $-(v)a$ suffixes is represented as /-aj-aj/ in their papers.

This analysis is based on the following observation: i. Secondary Imperfective verbs ending with $-(v)a$ do not truncate the verbal suffix of the stem they are derived from (see (9a)); but ii. Secondary Imperfective verbs ending with $-iva$ curiously do ((9b); Feinberg 1980: 148).¹²

(9)	<i>Perfective</i>		<i>Secondary Imperfective</i>		<i>Gloss</i>
a.	/za-bol ^j -é-t ^j /	za-bol-é-t'	→	/za-bol ^j -e-vá-t ^j /	za-bol-e-vá-t' 'to be sick'
	/ví-čist ^j -i-t ^j /	vý-čist-i-t'	→	/vi-čist ^j -i-vá-t ^j /	vy-čič-á-t' 'to clean'
b.	/ví-dum-va-t ^j /	vý-dum-a-t'	→	/vi-dúm-Ø-iva-t ^j /	vy-dúm-yva-t' 'to invent'

Coats and Feinberg propose to make this morphological truncation unnecessary. They point out that there is no need for a new imperfectivizing suffix stored in the lexicon if we suppose that the imperfective verb in (9b) is built on the same model as verbs in (9a): i.e. $-iva$ is the realization of $-(v)a$ preceded by the suffix of the perfective stem $-(v)a$ (see (10)).¹³

(10)	<i>Perfective</i>		<i>Secondary Imperfective</i>		<i>Gloss</i>
	/ví-dum-va-t ^j /	vý-dum-a-t'	→	/vi-dúm-va-va-t ^j /	vy-dúm-yva-t' 'to invent'

However, this hypothesis (though valuable) faces the following issue: some verbs ending with $-iva$ are not derived from a perfective stem ending with $-(v)a$ (see (11)). In this case, the authors assume an *ad hoc* reduplication of the imperfectivizing suffix $-(v)a$ to account for the emergence of $-iva$ (Coats 1974: 35–36; Feinberg 1980: 149).

(11)	<i>Perfective</i>		<i>Imperfective</i>		<i>Gloss</i>
	/s-pros ^j -í-t ^j /	s-pros-í-t'	→	/s-prás ^j -i-va-va-t ^j /	s-práš-iva-t' 'to ask'

For that reason, this analysis has been quite unpopular so far. In what follows, I introduce an argument from Distributed Morphology in support of the Reduplication Hypothesis. I show that a reduplication of $-(v)a$ in verbs like in (11) is not that *ad hoc*. It is confirmed by an independent argument, even though the motivation of this process still needs to be fully elucidated.

3.3 An argument from Distributed Morphology (Enguehard 2015a; 2016)

This sub-section outlines an independent argument introduced in Enguehard (2015a, 2016) in support of the Reduplication Hypothesis.¹⁴

In Enguehard (2015a, 2016), I showed that the Reduplication Hypothesis is independently confirmed by a morphophonological operation involved in verbs ending with $-iva$. This operation consists of an a-mutation of last root vowels /o/ (12).¹⁵

¹² The palatalization observed in this type of verbs (here: $st \rightarrow šč$) is assumed to be conditioned by the suffix $-i$ found in the perfective form (Halle 1963: 369–371; Svenonius 2004a: 187). This suffix is phonologically deleted before another derivational suffix, but it is still realized as a palatalization of the preceding consonant.

¹³ The issue of how the first vowel /a/ in $-va-va-$ changes into /i/ will be addressed later in the paper. This derivation is not without problem. However, it is interesting to note that the Bulgarian equivalent of Russian $-iva$ is $-ava$ (see Enguehard 2015a) (e.g. Russian. $za-igr-yva-t'$ 'to flirt' and Bulgarian $za-igr-áva-m$ 'to/I start to play').

¹⁴ The following summary cannot be as comprehensive as a whole paper. I just mention some relevant data and representations. The reader is referred to Enguehard (2015a, b, 2016) for a complete argumentation.

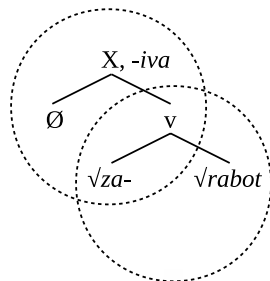
¹⁵ This mutation does not occur in two contexts: i. when the last root vowel is not /o/; and ii. in some denominal verbs. An analysis of these exceptions is proposed in Enguehard (2015b). In short, it is proposed that: i. /o/ alternates with /a/ because it can be reduced to [a] in (pretonic) unstressed syllable; and ii. denominal verbs that do not undergo a-mutation have a complex structure that blocks mutations of the root.

(12)	<i>Perfective</i>	<i>Imperfective</i>	<i>Gloss</i>
	s-prós-i-m	s-práš-iva-jem	‘we ask’
	za-kónč-i-t’	za-kánč-iva-t’	‘to finish’
	za-rabót-a-t’	za-rabát-yva-t’	‘to earn’

After having argued that *-iva* is situated higher than *v* in the morphosyntactic tree (13),¹⁶ I pointed out that the o/a alternation conditioned by *-iva* is theoretically unexpected. Given that *-iva* is situated in the external domain (i.e. outside the first phase), PIC (v.1) implies that it cannot access the root (circles in (13) represent spheres of possible interaction). Accordingly, phonological operations are impossible between *-iva* and the root.

However, phonological operations are possible between: i. *-iva* and *v*; and ii. between *v* and the root. Thus an indirect interaction is possible between *-iva* and the root if we assume that *v* involves a material that: i. is phonologically deleted by *-iva* and; ii. triggers a modification of the root.¹⁷

(13) Representation of *za-rabát-yva-t’* ‘to earn’ (first proposal)



A similar indirect interaction between *-iva* and the root was already proposed by Halle (1963: 369–371), Flier (1972: 239–240) and Coats (1974: 33) in order to account for perfective verbs ending with *-i* that show a palatalization of the last root consonant in the Secondary Imperfective form (14).

(14)	<i>Perfective</i>	<i>Secondary Imperfective</i>	<i>Gloss</i>
	s-pros-í-t’	s-práš-iva-t’	‘to ask’
	ot-korm-í-t’	ot-kárm’-iva-t’	‘to fatten up’
	vý-rast-i-t’	vy-rášč-iva-t’	‘to cultivate’

Following their analysis, the suffix *-i* of the perfective verbs in the first column of (14) is maintained in the underlying representation of their imperfective counterpart (second column of (14)). On the surface, *-iva* deletes *-i*, which is realized as a palatalization of the preceding consonant (15) (see also footnote 12).

(15) /s-pros^l-i-iva-t^l/ –vowel deletion→ s-práš-yva-t’ ‘to ask’

I argue that the o/a alternation results from the same mechanism: *-iva* deletes a *-(v)a* suffix expressing *v* in (13). As a consequence, *-(v)a* is phonetically realized as an a-mutation of the root vowel /o/ (16) (for a detailed phonological derivation, see Enguehard 2015b; 2016: 595–598).

(16) /za-rabot-va-iva-t^l/ –vowel deletion→ za-rabát-yva-t’ ‘to earn’

¹⁶ Here, *-iva* refers to a complex item expressing a set of nodes represented by *X*.

¹⁷ The representation of prefixes in the specifier of the categorial head is not the standard view. It is generally assumed (e.g. Svenonius 2004b; Ramchand 2008) that prefixes are in the specifier of AspP (*superlexical* prefixes), or in the complement of the verb (*lexical* prefixes). This aspect is not relevant for the argumentation of the present analysis. See Enguehard (2016: 579–587) for discussion.

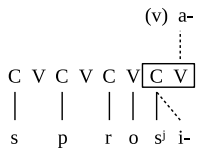
This analysis implies that all verbs showing an a-mutation of /o/ involve a deleted $-(v)a$ in their underlying structure. In other words, the reduplication of $-(v)a$ in the representation of verbs like *s-práš-iva-t'* ‘to ask’ is confirmed by an independent argument.

It is important to mention that this assumption raises an issue about the representation of the palatalization in (15). In the classical analysis, it is assumed that the vowel deletion results from a constraint banning hiatuses (Jakobson 1948: 159–160; Svenonius 2004a: 180). However, if we assume that the underlying representation of *s-práš-yva-t'* is /s-pros^j-i-va-va-t^j/, we should not expect any vowel deletion. Note that this issue concerns the representation of the verbal suffix $-(v)a$, not the Reduplication Hypothesis. If we assume (*contra* Garde 1972) that $-(v)a$ is represented by /-aj/ (as in Coats 1974 and Feinberg 1980), then /s-pros^j-i-aj-aj-t^j/ correctly predicts *s-práš-yva-t'*. Nevertheless, I recall that the representation /-aj/ is not without problems. It requires a readjustment rule in order to derive the emergence of -v- (see Section 2.1.1). Similarly, it is possible to assume a readjustment rule to account for the unexpected vowel deletion before /-va/. Instead, I suggest a representational approach of this issue. I assume that *-i* and $-(v)a$ share the same skeletal slot (framed in (17)).¹⁸ The suffix *-i* surfaces as a vowel (17a), except when it co-occurs with $-(v)a$ (17b). In this case, due to space limitations, it links to the preceding consonant.¹⁹ This proposal is a representational equivalent – in terms of circularity – of the readjustment rule proposed in Flier (1972).

(17) a. Perfective stem

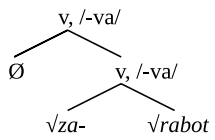


b. Imperfective stem with an underlying $-(v)a$



Now assuming the Reduplication Hypothesis proposed by Coats (1974) and Feinberg (1980), the occurrence of *-i-* turns out to be predictable: it appears in cases where $-(v)a$ is reduplicated. This reduplication should not be analyzed as a surface (phonological) phenomenon (the analysis of Coats and Feinberg involves two underlying $-(v)a$ suffixes), but as an underlying (morphosyntactic) configuration. In (18), it is represented with the repetition of two identical nodes (here: v).²⁰

(18) Representation of *za-rabát-yva-t'* ‘to earn’ (second version)



¹⁸ I assume this skeletal slot to be inserted by a morphosyntactic head, e.g. v.
¹⁹ Note that (17b) is not the surface form (*spraš-a- is not attested). The derivation of *-iva* will be covered in Section 4.
²⁰ The label of the node is not crucial for the present analysis. Here, I follow the results of Enguehard (2015a, 2016).

But how to account for the emergence of *-i-*? It was proposed in Coats (1974: 34) and Feinberg (1980: 147–148) that *-i-* results from a phonological raising of the first vowel /a/. It is important to note that such a change is unusual in this context (/ava/ is perfectly well-formed, e.g. *davát* ‘give’). In order to support this unexpected phenomenon, Coats draws a parallel with the (previously mentioned) height contrast between stressed /ó/ and unstressed /i/ in *-ój/-ij* (see Table 3).²¹ The parallel proposed in Coats (1974) is intriguing, but the specific raising rule he proposed has not been explained or confirmed until now. Thus it is doubtful whether this phenomenon can be analyzed as a strict phonological process, without any reference to morphological information.

To sum up this sub-section, the Reduplication Hypothesis is based on the observation that *-iva* unexpectedly triggers a morphological truncation of *-(v)a*. Coats (1974) proposes to avoid this truncation issue by assuming that *-iva* results from a succession of *-(v)a* suffixes: i. the first belongs to the perfective stem; ii. the second is an imperfectivizing marker. Then, in order to account for the presence of *-iva* in verbs derived from stems with no *-(v)a*, Coats suggests a reduplication of the imperfectivizing marker. This configuration is supported by the a-mutation co-occurring with *-iva* (Enguehard 2015a). Finally, Feinberg (1980) extends this reduplication mechanism to all verbs ending with *-iva*. Such an assumption supposes that the emergence of *-i-* is morphologically conditioned by a specific reduplicated structure.

Of course, it is possible to assume that the suffix responsible for the a-mutation is distinct from the suffix realized in *-iva*. For instance, Griбанова (2015) suggests that the a-mutation is due to a set of melodic features present in the Asp head of the verb. I do not aim to exclude this possibility. However, one can legitimately wonder how to validate *or* invalidate such a lexically specified set of features which is not encountered elsewhere in Russian morphology. By assuming a reduplication of the imperfectivizing marker, the present analysis takes risks purposefully. The factors conditioning *-iva* and the a-mutation being *structural*, not *lexical*, they can be validated *or* invalidated by external data.

To conclude this section, I addressed analyses proposing that *-i-* and *-j-* can be deduced from their context. Accordingly, they should not be part of the underlying structure. However, I pointed out that their derivation cannot be deduced from phonology only. They both involve a certain degree of morphological conditioning. Now, I move on to my proposal. I will show that the Reduplication Hypothesis can motivate the emergence of *-i-* and *-j-*.

4 Derivation of *-i-* and *-j-*

In this section, I show that the presence of *-i-* and *-j-* can be deduced from a unique morphosyntactic constraint: Identity Avoidance.

4.1 Identity Avoidance

Hoekstra (1984), Grimshaw (1997) and Van Riemsdijk (1998) (among others) shed light on an identity avoidance constraint banning the succession of two identical heads in morphosyntactic trees. This constraint is sometimes referred to as an *OCP effect* applying to the syntactic structure (e.g. Van Riemsdijk 2008). Just like Obligatory Contour Principle *in phonology*, *OCP in morphosyntax* triggers repair mechanisms like deletion and/or addition of material (see Grimshaw 1997 about clitics in Italian and Spanish).²²

Returning to the representation of *-iva* in (18) above, one can notice that it involves a head *v* selecting another head *v*. Following the identity avoidance constraint, such a configuration

²¹ Coats supposes that *-ij* results from the same raising rule as *-iva*.

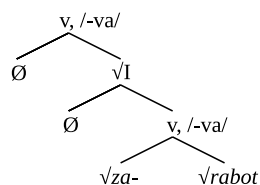
²² For the sentence ‘one washes oneself’, the Italian expected form **si si lava* becomes *ci si lava* (addition), and the Spanish expected form **se se lava* becomes *se lava* (deletion).

should normally be ill-formed. This theoretical ill-formedness of the representation in (18) motivates the occurrence of *-i-*. The emergence of such a phonologically unpredictable segment in a repetition context is very similar to reduplication phenomena with a fixed segmentism (e.g. *table-shmable*) addressed in Yip (1992, 1998) and Alderete et al. (1999), among others. These authors argue that the fixed segmentism at issue is a repair mechanism motivated by a constraint banning repetition. This constraint is what makes the representation in (18) ill-formed. Thus, my hypothesis is that *-i-* is, on the surface, a sort of fixed segmentism, just like *-shm-* in *table-shmable*.

But what is the underlying status of this fixed segmentism in Russian? In the present case, *-i-* has three properties: i. it is phonologically unpredictable (see Section 3); ii. it is semantically null; and iii. it is hypothetically conditioned by a structural requirement. An item with the same three properties is discussed in Faust (2011: 222–223; 2013: 23–29). Focusing on the morphonology of Modern Hebrew, Faust identifies an unexpected segment /i/ in the feminine form of loanwords (e.g. *astronawt-it* ‘astronaut-F’). The occurrence of this segment /i/ contrasts with the usual form of the feminine marker *-a(t)*.²³ Thus, what does motivate its insertion? The segment /i/ seems not to be directly related to gender. Indeed, the feminine form of derived adjectives – which always show a feminine marker *-it* – also have a masculine counterpart ending with *-i* (*merxav* ‘space’ → *merxav-i* (M), *merxav-i-t* (F) ‘spatial’). In this case, it is possible to parse *-it* into *-i-t*. Faust argues that the segment /i/ found in the feminine form of loanwords is the same morphological item as the segment /i/ observed in derived adjectives. Accordingly, he proposes an analysis where the function of this /i/ is to license certain derivational processes. More specifically, Faust assumes that: i. loanwords are borrowed with their category; and ii. categories and the feminine marker select only roots. Following these two assumptions, the expected underlying structures of denominal adjectives (i.e. [_a [_n merxav]-it]) and the feminine form of loanwords (i.e. [[_n astronawt]-it]) should be ill-formed. As a consequence, Faust proposes that /i/ is the realization of an *expletive* root node inserted in order to license a merge of heads which would normally be incompatible.²⁴

I argue that Russian *-i-* is similar to the expletive root of Faust (2011, 2013). It is inserted in order to license a merge of heads that would normally be incompatible. The only difference with Faust’s proposal is that the selectional incompatibility in (18) specifically results from Identity Avoidance. I assume *-i-* to be the realization of a root √I (the front/palatal element of Element Theory, see Kaye et al. 1985) with no specific meaning. This root is inserted in order to repair the ill-formed representation in (18) (compare with (19)). From this perspective, *-i-* turns out to be the morphosyntactic equivalent of an *epenthesis*: i.e. a sort of buffer surfacing in order to satisfy a structural requirement (here: Identity Avoidance).

(19) Representation of *za-rabát-yva-t’* ‘to earn’ (final version)



²³ In native words, *-a(t)* is realized as [a] in stressed context and as [et] in unstressed context (Faust 2013: 413).

²⁴ The notion of “expletive root” is modeled on the notion of “expletive pronoun”. Both are: i. semantically null; and ii. inserted under structural requirement.

Table 5: Underlying representation of SA and LA suffixes.

	M.SG	F.SG	N.SG	PL
SA suffixes	/-ʲ/	/-a/	/-o/	/-i/
LA suffixes	/-ʲ-ʲ/	/-a-a/	/-o-o/	/-i-i/

At this stage of the analysis, the occurrence of *-i-* is motivated in morphosyntax. To validate the analysis of *-i-* as an epenthetic root inserted between two identical heads, I now show that the same root is inserted in another suffix we have examined: *-Vj(V)*. This case will confirm that the insertion of *-i-* is conditioned by reduplication in general, not by the lexical properties of the Secondary Imperfective suffix in particular.

4.2 Another case of reduplication: Long Adjectives

I now go back to LA suffixes. I argue that these are another case of reduplication involving an expletive root \sqrt{I} .

We already saw in Section 2.2 that most LA suffixes show two identical gender markers with an intervening consonant *-j-*. The masculine suffix *-ój/-ij* is the only exception. Given that we defined the masculine marker of short adjectives as \emptyset , we should not expect the occurrence of a vowel preceding *-j-*. In order to account for this issue, it is necessary to refer to the history of Russian. In Old Slavic, the masculine marker was a vowel called *back yer* (traditionally represented by *ь*). In Modern Russian, back yers disappeared in most cases, except when followed by another yer (see Lightner 1965). However, Lightner (1965), Melvold (1989) and Scheer (2001) agree that these back yers are maintained as floating features in the underlying representation of Russian words. More specifically, Hamilton (1980) and Melvold (1989: 35, 50) even argue that the masculine marker never ceased to be an underlying */-ʲ-ʲ/*. Based on this assumption, I propose that all LA suffixes involve a reduplication of their SA counterpart (see Table 5). Regarding masculine */-ʲ-ʲ/* \rightarrow *-ój/-ij*, only the first yer is realized (because it is followed by another yer).

In the following sub-section, I show how the reduplication can derive the intervening segment *-j-* in parallel with *-i-*.

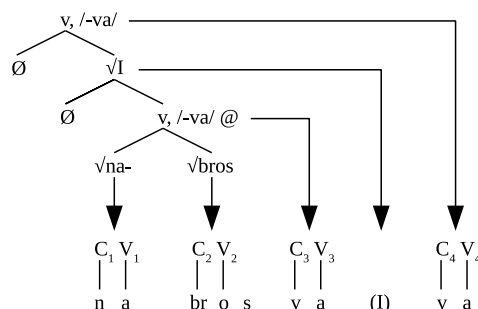
4.3 Phonological derivation

In this sub-section, I aim to show how the expletive root \sqrt{I} is phonologically derived as *-i-* in *-iva* and as *-j-* in LA suffixes. My proposal follows the CVCV framework introduced in Lowenstamm (1996).

4.3.1 Derivation of *-i-*

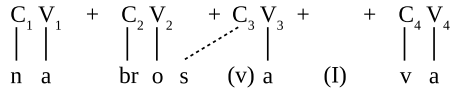
In the case of *-iva*, the reduplication of *-(v)a* leads to the underlying configuration in (20). For the purpose of the analysis, I assume that: i. $|I|$ is a floating element; and ii. all the other (non empty) nodes insert a CV unit. (About linearization in Mirror Theory, see Appendix A.)

(20) Representation of *na-brás-yva-t'* ‘throw on’



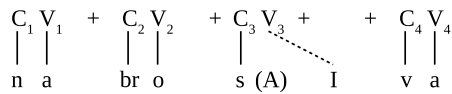
First, the last root consonant needs to be realized (see Section 2.2.1). It links to C3 (21). In absence of available position, /v/ drops. At this stage, we obtain the configuration found in Bulgarian *-ava*.

(21) Derivation of *na-brás-yva-t'* ‘throw on’ (first stage)



Second, the floating |I| needs to be realized too, but there is no available position. Accordingly, we expect this element to move to the nearest compatible position on its left. By assumption, it takes precedence over the element |A|. ²⁵ The suffix *-iva* is obtained.

(22) Derivation of *na-brás-yva-t'* ‘throw on’ (second stage)



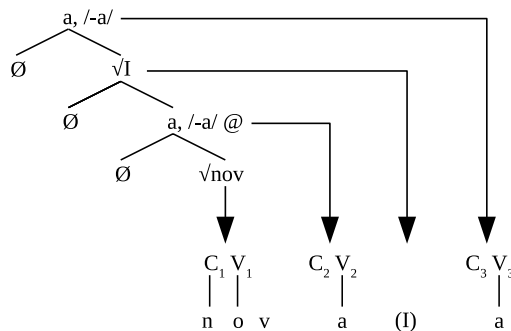
Finally, the element |A| moves to the root and replaces the vowel /o/ (see Enguehard 2015b, 2016 for a complete analysis): *na-brás-yva-t'*.

4.3.2 Derivation of *-j-*

I now turn to the derivation of LA suffixes. I show that the hypothesis of an expletive root √I accounts for both the presence of *-j-* and the o/i alternation of masculine *-ój/-ij*.

In the case of feminine *-aja*, neuter *-oje* (i.e. /-ojo/) and plural *-ije* (i.e. /-iji/), the derivation applies as follows. The reduplication leads to the configuration in (23). ²⁶ I assume the reduplicated node to be the categorial head a. ²⁷ As in (20), i. the intervening expletive root √I is floating; and ii. all the other nodes insert a CV unit.

(23) Representation of LA *nóv-aja* ‘new-F.SG’

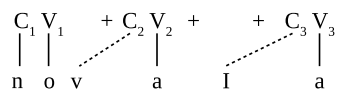


Floating |I| needs to be realized. Unlike representation (22), a skeletal position (C3) is available in this case. After |I| is linked to this position, the suffix *-aja* surfaces (24).

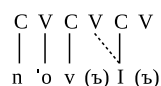
²⁵ Both elements are heads. Following Harris & Lindsey (1995), segmental expressions can have only one head. Thus head elements are not expected to fuse. Moreover, due to vowel reduction, Russian does not have mid vowels (i.e. complex vowels) in unstressed context.

²⁶ Due to space limitations, only /-a-a/ is represented. The same analysis goes for the others LA suffixes: /-ъ-ъ/, /-o-o/ and /-i-i/.

²⁷ Depending on the chosen analysis, it can also be a functional head. The issue concerning the accurate identity of the reduplicated node is not the core of the present analysis.

(24) Derivation of LA *nóv-aja* ‘new-F.SG’

In the case of masculine *-ój/-ij*, the rule proposed in Lightner (1965) states that /ɤ/ surfaces only if it occurs before another /ɤ/ in the following syllable. Accordingly, the final /ɤ/ in (25a, b) is dropped, but it triggers the realization of the preceding /ɤ/. Following Lightner’s rule, the stressed form of /ɤ/ is realized as *o* (25a). But unexpectedly, /ɤ/ surfaces as *i/y* in the unstressed masculine form of the LA suffix (25b).²⁸ Interestingly, /i/ is the vocalic counterpart of /j/. Thus I propose that this realization of /ɤ/ is due to a total assimilation by |I|. The reason why this total assimilation applies to the yer in (25b), but not to /a/ in (24) is due to the specific status of the former. Following Scheer (2001), yers are lexically floating vowels. When a yer is unstressed, |I| can take precedence over it in order to fill the empty V position (25b). However, /a/ is not floating. In other terms, there is no empty V position to fill in (24). As a consequence, we do not expect any assimilation of /a/ in *-aja*.

(25) a. *kak-ój* ‘what kind of’b. *nóv-yj* ‘new’

This analysis accounts for the parallel drawn in Coats (1974) between the raising of /a/ in *-va-va/* → *-iva* and the raising of /o/ in *-ój/-ij*: both result from an assimilation by the expletive root √I.

To conclude this section, I showed that the Reduplication Hypothesis and the expletive root √I account for the derivation of: i. the verbal suffix *-iva*; and ii. the LA suffixes, including masculine *-ój/-ij*.

5 Discussion

Two issues raised by this analysis deserve to be discussed in a further study. First, is there a semantic motivation for a similar reduplication process in verbs and adjectives? Second, the quality of the expletive root is still entirely *ad hoc*. How can one account for the fact that the intervening root is realized by |I| and not by another element? In what follows, I provide some informal answers.

5.1 Semantics of reduplication

As we saw in Section 2, the semantic value of *-iva* is assumed to be imperfectivity. But the semantic value of LA suffixes is more obscure. I argue that it is to some extent similar to imperfectivity.

First, it must be noticed that long and short adjectives contrast only in predicate position. This contrast can take various forms (see Comtet 1997: 136 for details). However, short adjectives generally express a restriction of time or quality. As an example, compare (26a)

²⁸ Given that /ɤ/ is realized as *o* in stressed context, we expect it to be reduced to [ə] in unstressed context (see Table 3 and text beneath). This pronunciation is also attested (Avanesov 1968: 166–170), and it is unproblematic. However, the realization of /ɤ/ as a non back vowel *i/y* needs to be explained.

and (26b). In (26a), the short form *bólen* expresses a state that is limited in time. In (26b), the long form *bol'n-ój* denotes a chronic state.

- (26) a. on *bólen* 'he is sick'
 ona *umn-á* 'she is smart'
 stol *t'ažél* 'the table is heavy (for me)!'

 b. on *bol'n-ój* 'he is a sick man'
 ona *úmna-ja* 'she is a smart person'
 stol *t'ažél-yj* 'the table is heavy (generally speaking)'

This contrast between stage-level (26a) and individual-level predicates (26b) is comparable to the contrast expressed by Russian grammatical aspects. On the one hand, both stage-level and perfective express a state or an action over a *delimited* period of time. On the other hand, both individual-level and imperfective express a state or an action over an *undelimited* period of time. Such a correlation between individual/stage-level predicates and aspect was already explored in Luján (1981) and Camacho (2012) for Spanish *ser/estar* (see also Arche 2012 for criticism). The contribution of the present analysis to this issue is to connect two properties of individual-level adjectives and imperfective aspect in Russian: i. they both express an undelimited period of time; and ii. they can be both realized by reduplication.

The accurate semantics of this reduplication requires further investigation (the present paper focused on a morphological reasoning only). An iconic relation between imperfectivity and reduplication was already pointed out in several studies, including Naylor (1986), Zack (1994) and Mattes and Schwaiger (2014). But it is important to mention that reduplication in *-iva* seems not to show any aspectual contrast with its non reduplicated variant *-va* (both express imperfective).

Nevertheless, this observation is not absolutely true. In unprefixated verbs, *-iva* can have a specific iterative value (e.g. *xáž-yva-t'* 'to visit several times') (Garde 1980: §605), which is not shared by *-(v)a*. Moreover, Karcevski (1927: 93) analyzes the historical spread of forms with *-iva* as a the result of a mechanism repairing an ambiguity between *-(v)a* and a (phonologically similar) theme vowel *-a*. It is thus possible that reduplication does not provide any semantic value in verbs, but *reaffirms* the aspectual value of the suffix *-va*.²⁹

5.2 Quality of the expletive root

Given that \sqrt{I} is a root, it is supposed to be stored in the lexicon as such. Accordingly, its quality cannot be predicted phonologically. But a question arises: do we have independent arguments to confirm that the intervening element $|I|$ found in *-iva* and *-Vj(V)* is a lexical item?

Interestingly, the phonological form of the expletive root \sqrt{I} corresponds to the phonological form of the Russian coordinating conjunction *i* 'and'. Moreover, the function of the coordinating conjunction is similar to the function of the expletive root: both coordinate morphosyntactic nodes. More specifically, *i* (i.e. 'and') coordinates items exclusively belonging to the same category (e.g. compare *Máša i Pétr* 'Mary_N and Peter_N' and **Máša i xorošó* 'Mary_N and good_A'). This is exactly the function of \sqrt{I} in reduplication processes. Thus it could be proposed that the Russian coordinating conjunction is a root \sqrt{I} which can intervene between phrases, words or bound morphemes. Given that \sqrt{I} has no semantic value in *-iva* and *-Vj(V)*, the present supposition opens perspectives for the

²⁹ This hypothesis is developed in Enguehard (2016).

general analysis of coordinating conjunctions. These could be items inserted only under structural requirements, and not for lexical purposes.

A similar hypothesis was proposed in Fábregas (2005: 238–242) to account for the linking element /i/ occurring in Spanish compounds. However, unlike Spanish, \sqrt{I} is not a usual linking element in Russian compounds. These generally involve a vowel -o- (e.g. *sam-o-vár* : *sam* + *var* ‘self + boil’).³⁰ In the meantime, it could be supposed that \sqrt{I} and -o- have different functions: e.g. \sqrt{I} coordinates identical categorial nodes, when -o- coordinates roots. The relation between reduplication with an expletive root and compounding with a linking element deserves to be addressed in a further study.

6 Conclusion

To conclude, I argued that the imperfectivizing suffix *-iva* and the LA suffixes result from the same reduplication process. First, I pointed out that both *-iva* and *-Vj(V)* involve a segment with an unclear morphological status: *-i-* and *-j-* respectively. Second, I argued that these segments are conditioned by their morphological context. Thus they should not be included in the underlying representation. Finally, I proposed that *-i-* and *-j-* are derived from a root \sqrt{I} occurring in reduplicated structures in order to avoid a sequence of identical items. In this respect, form is directly motivated by morphosyntax.

This analysis also sheds new light on Garde (1972) and Coats (1974). Garde proposed that *-j-* is an epenthetic consonant partially conditioned by morphology. I argued that this epenthesis is *entirely* conditioned by morphosyntax. Coats proposed an unexpected raising process to account for /-va-va/ → *-iva* and the alternation between *-ój* and *-ij*. I showed that these changes can be accounted for without such an idiosyncratic rule. Both result from the occurrence of \sqrt{I} in reduplication contexts.

Additional File

The additional file for this article can be found as follows:

- **Appendix A.** Representation and linearization in Mirror Theory. DOI: <https://doi.org/10.5334/gjgl.242.s1>

Abbreviations

ACC = accusative, F = feminine, M = masculine, N = neuter, PL = plural, SG = singular, LA = Long Adjective, SA = Short Adjective, OCP = Obligatory Contour Principle, V = vowel

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Competing Interests

The author has no competing interests to declare.

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³⁰ See e.g. Gouskova (2010).

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