

The story of *-š/-iš*: the comparative in Ukrainian

Anastasiia Vyshnevskia
KU Leuven

Abstract The comparative suffix in Ukrainian seemingly has four allomorphs: the productive form *-iš*, and the non-productive forms *-š*, *-č*, and *-šč*. This paper is based on a claim by Bevzenko (1960) that the suffixes *-č* and *-šč* are derived from *-š*, being a result of assimilative-dissimilative changes. As a result, the number of suffixes can be reduced to two, namely *-š* and *-iš*. I will show that the distribution of these two suffixes in Ukrainian is not regulated by phonology.

Keywords: morphology, comparatives, allomorphy, Ukrainian

1. Introduction

The comparative form of Ukrainian adjectives is formed by adding a comparative suffix to the positive degree. This suffix follows the root and precedes the agreement marker, as in *dešev-yj* ‘cheap’¹ – *dešev-š-yj* ‘cheaper’. Ukrainian comparative suffixes are discussed in detail in this paper.

The article has the following structure. Section 2 provides an overview of Ukrainian comparative suffixes with a thorough description of their diachrony. Section 3 provides pieces of evidence that the distribution of these comparative suffixes cannot be explained in phonological terms. Section 4 concludes the discussion and suggests that this distribution should be approached from a morphological point of view.

¹ This and other adjectives that are provided in this paper can be found on the Ukrainian National Corpus (MOVA) website <http://www.mova.info/>.

2. The number of comparative suffixes in Ukrainian

The comparative form (CMPR) of adjectives in Ukrainian (UKR) is mostly formed by adding a comparative suffix to the positive form (POS).² Adjectives in Ukrainian show agreement with nouns in gender, number, and case. This agreement marker (AGR) is obligatory.³

	POS	CMPR	translation
a.	star-yj	star-š-yj	old
b.	molod-yj	molod-š-yj	young
c.	mjak-yj	mjak-š-yj	soft
d.	bahat-yj	bahat-š-yj	rich
e.	zdorov-yj	zdorov-š-yj	healthy
f.	dovh-yj	dov-š-yj	long
g.	korot-k-yj	korot-š-yj	short
h.	ton-k-yj	ton-š-yj	thin
i.	leh-k-yj	leh-š-yj	light
j.	solod-k-yj	solod-š-yj	sweet
k.	švyd-k-yj	švyd-š-yj	fast
l.	hlad-k-yj	hlad-š-yj	smooth
m.	hlyb-ok-yj	hlyb-š-yj	deep
n.	dal-ek-yj	dalj-š-yj	far
o.	šyr-ok-yj	šyr-š-yj	wide
p.	malyj	men-š-yj	small
q.	velyk-yj	bilj-š-yj	big
r.	pohan-yj	hir-š-yj	bad
s.	dobr-yj	lip-š-yj	good

Table 1: Adjectives that take the suffix -š

The comparative suffix has four allomorphs: *-iš*, *-š*, *-č*, and *-šč*. The suffix *-iš* is the most productive one, most of the adjectives take it in the

² The other way is to use the analytical form: an adverb *biljš* ‘more’ followed by an adjective in the positive form. The current research is concerned with synthetic comparative adjectives only, and they will be referred to as ‘comparative adjectives’ throughout the article.

³ The nominative masculine singular marker *-yj* will be used throughout the paper.

comparative form. At the same time, there is a limited set of adjectives that take the suffix *-š* (Table 1), *-šč* (Table 2), or *-č* (Table 3).

	POS	CMPR	translation
a.	vys-ok-yj	vyš-č-yj	high
b.	dobr-yj	kraš-č-yj	good
c.	tovst-yj	tovš-č-yj	fat

Table 2: Adjectives that take the suffix *-šč*

As I will show, there are actually only two comparative suffixes: the productive *-iš*, and the non-productive *-š*. The other two are just phonologically conditioned allomorphs of *-š*. When we decompose *-šč* (represented in Ukrainian by one grapheme *-ш*) into *-š* (the last consonant of the root) and *-č* (the suffix), we get down to three allomorphs.

	POS	CMPR	translation
a.	važ-k-yj	važ-č-yj	heavy
b.	tiaž-k-yj	tiaž-č-yj	severe
c.	duž-yj	duž-č-yj	strong
d.	blyzj-k-yj	blyž-č-yj	close
e.	nyzj-k-yj	nyž-č-yj	low
f.	vuzj-k-yj	vuž-č-yj	narrow
g.	doroh-yj	dorož-č-yj	expensive

Table 3: Adjectives that take the suffix *-č*

When we look at the *-č* suffix more carefully, we realise it is a phonologically determined allomorph of *-š*. So, we are down to two suffixes: *-iš* and *-š* (where the last of these corresponds to surface *-š*, *-č* and *-šč*).

morphology	phonology	orthography
<i>-iš</i>	<i>-iš</i>	<i>-иш</i>
<i>-š</i>	<i>-š</i>	<i>-ш</i>
	<i>-č</i>	<i>-ч</i>
	<i>-šč</i>	<i>-шч</i>

Table 4: Allomorphy in CMPR

2.1. *The diachrony of the Slavic comparative suffixes*

In order to understand how this variation of comparative suffixes came into being, I will take a look at the diachrony. I start with Old Church Slavonic (OCS), which dates back to around the 10th century, mentioning briefly the preceding Proto-Slavic (PS).

As Lunt (2001:1) describes it, OCS is “The language of the oldest Slavic manuscripts [...] Since it is a literary language, used by the Slavs of many different regions, it represents not one regional dialect, but a generalized form of early Eastern Balkan Slavic”. It co-existed with Common Slavic (CS), which later developed into separate Eastern Slavic languages (Russian, Ukrainian, and Belarusian), and heavily influenced them.

When it comes to comparative adjectives in Old Church Slavonic, Bevzenko (1960:218) claims that singular adjectives in Nominative and Accusative were formed using the following suffixes, which in turn came from the (reconstructed) PS suffixes: **-jes* > [je]; **-ejes* > [eje]. These suffixes did not express agreement in gender, number, or case.⁴ The rest of the adjectives were formed using the following two suffixes:

	PS	OCS	UKR
(1)	1. <i>*-jъs</i> >	<i>-ъš</i> >	<i>-š</i>
	2. <i>*-ějъs</i> >	<i>-ějъš</i> >	<i>-iš</i>

They had to be followed by an agreement marker, which expresses gender, number, and case. Most of the adjectives were formed with *-ějъš* (modern Ukrainian *-iš*). The *-ějъš* suffix did not cause any phonological changes, unlike the suffix *-ъš*. Pavlenko (2010:103) argues for the same distinction between the two suffixes both in PS and OCS.

As Bevzenko (1960:218) explains, the adjectives that were derived with the suffix *-ъš* (modern Ukrainian *-š*) belonged to one of the three

⁴ Interestingly, the corresponding suffixes *-je/-eje* are still used in adjectives and adverbs in modern Russian.

categories presented below.⁵ In the first case (a) they lacked suffixes in the positive form.

(2)	POS root-AGR	CMPR root-CMPR-AGR	translation
a.	сух-ъ худ-ъ	суš-ьš-i хуž-ьš-i	dry thin
b.	выс-ок-ъ низ-ьк-ъ	выš-ьš-i ниž-ьš-i	high low
c.	велик-ъ мал-ъ	бол-ьš-i мьн-ьš-i	big small

The second case (b) was when the roots were followed by suffixes *-ok* /ok/, *-ьk* /ʊk/, and *-ьк* /ik/ in the positive. The last case (c) was when they had a suppletive root in the comparative: the root changed from the positive *velik* into the comparative *bol* and from *mal* into *мьн*. This is also supported by Lunt (2001:78) who lists the same three cases when the suffix *-ьš* occurred.

2.2. Assimilation and dissimilation

In this section I argue that the suffix *-č* is underlyingly the suffix *-š*, and the suffix *-šč* is comprised of the last consonant of the root *-š* and the dissimilated suffix *-š*. As can be seen in Table 5 (column CMPR) both suffixes *-č* and *-šč* are found when the root ends in a particular consonant: *ž* (a-g) or *š* (h-j).

Bevzenko (1960:219-220) gives a phonological explanation for the existence of the suffixes *-šč* and *-č* in the comparative form. He claims that they emerged as a result of assimilation and dissimilation. This is what I am going to discuss further in this section.

⁵ The *-ь* and *-ъ* (the so-called ‘yers’) were very short or ‘reduced’ vowels, corresponding to short [ɪ] and [ʊ] respectively (Lunt 2001:24-25). Around the 12th century there was a big phonetic change in East Slavic languages, and these vowels were reduced in certain positions, while in others they developed into the sounds [e] and [o].

	POS	CMPR	translation
a.	važ-k-yj	važ-č-yj	heavy
b.	tiaž-k-yj	tiaž-č-yj	severe
c.	duž-yj	duž-č-yj	strong
d.	blyzj-k-yj	blyž-č-yj	close
e.	nyzj-k-yj	nyž-č-yj	low
f.	vuzj-k-yj	vuž-č-yj	narrow
g.	doroh-yj	dorož-č-yj	expensive
h.	vys-ok-yj	vyš-č-yj	high
i.	dobr-yj	kraš-č-yj	good
j.	tovst-yj	tovš-č-yj	fat

Table 5: -č and -šč in Ukrainian CMPR

2.2.1. Assimilation

Adjectives mentioned above are presented in Table 6 along with their etymological forms (the *etymology* column)⁶ in the evolution to modern Ukrainian, dating back to Proto-Slavic (PS), or to Old High German (OHG). Assimilation took place when the last consonant of the root (*g*, *z*, or *s*) appeared next to the suffix *-š* (the *suffixation* column).

	etymology	suffixation	assimilation	translation
a.	OHG wāga	vag-š-yj	važ-š-yj	heavy
b.	PS *tęgnōti	tiaġ-š-yj	tiaž-š-yj	severe
c.	PS *dugъ	dug-š-yj	duž-š-yj	strong
d.	PS *blizъ	blyz-š-yj	blyž-š-yj	close
e.	PS *nizъ	nyz-š-yj	nyž-š-yj	low
f.	PS *qzъkъ	vuz-š-yj	vuž-š-yj	narrow
g.	PS *dorogъ	dorog-š-yj	dorož-š-yj	expensive
h.	PS *vysokъ	vys-š-yj	vyš-š-yj	high
i.	PS *krasъ	kras-š-yj	kraš-š-yj	good
j.	PS *tълstъ	tovst-š-yj	tovš-š-yj	fat

Table 6: Diachronic assimilative changes in CMPR

⁶ The etymology of these adjectives is taken from the Ukrainian etymological dictionary that can be found on <https://goroh.pp.ua/>

In examples (a-g), the last consonant of the root *z* or *g* appeared next to the suffix *-š*, assimilated and turned into *ž*. In examples (h-j), where the last consonant of the root was *s* (or, as in example j, the only case with the ending *st*⁷), it assimilated and turned into *š*. Instead of the expected comparative forms like *vag-š-yj*, *nyz-š-yj*, *kras-š-yj*, the forms *važ-š-yj*, *nyž-š-yj*, *kraš-š-yj* appeared as a result of this assimilation process.

Assimilation is quite frequent and is still productive in modern Ukrainian. Hryščenko (2002) provides some examples, where the consonants *-s* and *-z* preceding *-š*, *-č*, and *-ž* assimilate, as in Table 7.

	morphology	pronunciation	translation
a.	bez-šumno without-loud	beš-šumno	silent
b.	pryniš-šy bring-PERF	pryniš-šy	have brought
c.	z čolovikom with man-INSTR.	š čolovikom	with a man
d.	z-žovknuty pref.-turn yellow	ž-žovknuty	to turn yellow
e.	vinnyts-čyna vinnytsia-suf.	vinnyč-čyna	Vinnytsia oblastj (a region in Ukraine)

Table 7: Assimilation in Ukrainian

2.2.2. Dissimilation

According to Bevzenko (1960) the next stage was when dissimilation took place (the author is not explicit about the exact period when it occurred). The suffix *-š* appeared next to the assimilated consonant of the root *-ž* or *-š* and dissimilated, turning into *-č*. Instead of *blyž-š-yj* or *vyš-š-yj* Ukrainian ended up having *blyž-č-yj* and *vyš-č-yj* in the comparative. Table 8 provides an exhaustive list of Ukrainian comparative adjectives with *-č* (in examples a-g) or *-šč* (in examples h-j). Recall from the earlier discussion that in the case of *-šč* (in h-j) the *-š* is the last

⁷ The last consonant of the root *t* probably got deleted here because of the consonant clustering: /vstš/ -> /vsš/.

consonant of the root, and *-č* is the suffix. While the previous subsection suggests that the *-š* in *-šč* is the assimilated last consonant of the root, this subsection suggests that the *-č* is the dissimilated suffix *-š*.

	assimilation	dissimilation	translation
a.	važ-š-yj	važ-č-yj	heavy
b.	tiaž-š-yj	tiaž-č-yj	severe
c.	duž-š-yj	duž-č-yj	strong
d.	blyž-š-yj	blyž-č-yj	close
e.	nyž-š-yj	nyž-č-yj	low
f.	vuž-š-yj	vuž-č-yj	narrow
g.	dorož-š-yj	dorož-č-yj	expensive
h.	vyš-š-yj	vyš-č-yj	high
i.	kraš-š-yj	kraš-č-yj	good
j.	tojš-š-yj	tojš-č-yj	fat

Table 8: Diachronic dissimilative changes in CMPR

In general dissimilation is not frequent in Ukrainian, and it mostly appears as a result of diachronic changes. Some of the examples that [Plušć \(2009:36-37\)](#) and [Pavlenko \(2010:32\)](#) use to argue for dissimilation are provided in Table 9. They illustrate the development of Proto-Slavic words into CS/OCS with assimilated consonants, which then dissimilated in Ukrainian. In the first two examples *-d* assimilated and turned into *-t*, and then *-t* dissimilated into *-s*. The third example illustrates the assimilation of *-k* into *-t*, which then dissimilated into *-s*.

	PS	OCS	Ukrainian	translation
a.	*povědtь >	pověttь >	povist'	a short story
b.	*kradti >	kratti >	krasty	to steal
c.	*plekti >	pletti >	plesty	to weave

Table 9: Diachronic dissimilation in Ukrainian

[Bevzenko \(1980:114\)](#) claims that in certain Ukrainian dialects dissimilation still takes place in comparative adjectives that end in *t* or *d*. Instead of the standard Ukrainian *molod-š-yj*, *korot-š-yj*, *bahat-š-yj* such dialects have the forms *molod-č-yj*, *koroč-č-yj* and *bahač-č-yj*. In other

Ukrainian dialects instead of *molod-š-yj* and *solod-š-yj* there are such forms as *molod-ž-yj* and *solod-ž-yj*. Bevzenko says that these cases involve dissimilation along with assimilative changes.

2.2.3. Assimilation and dissimilation: summary

The assimilative-dissimilative changes are summarized in Table 10. In examples (a-g) the last consonant of the root assimilated into *ž*, while in (h-j) it assimilated into *š* (the *assimilation* column). Then the suffix *-š* dissimilated into *-č* (the *dissimilation* column).

	suffixation	assimilation	dissimilation	translation
a.	vag-š-yj	važ-š-yj	važ-č-yj	heavy
b.	tiag-š-yj	tiaž-š-yj	tiaž-č-yj	severe
c.	dug-š-yj	duž-š-yj	duž-č-yj	strong
d.	blyz-š-yj	blyž-š-yj	blyž-č-yj	close
e.	nyz-š-yj	nyž-š-yj	nyž-č-yj	low
f.	vuz-š-yj	vuž-š-yj	vuž-č-yj	narrow
g.	dorog-š-yj	dorož-š-yj	dorož-č-yj	expensive
h.	vys-š-yj	vyš-š-yj	vyš-č-yj	high
i.	kras-š-yj	kraš-š-yj	kraš-č-yj	good
j.	tovst-š-yj	toš-š-yj	toš-č-yj	fat

Table 10: Assimilative-dissimilative changes in CMPR

Apart from Bevzenko (1960) the assimilative-dissimilative explanation for *-č* and *-šč* is also proposed by Plušč (2009), Plušč (2010), Hryščenko (2002). Since the suffix *-č* is underlyingly *-š*, we are left with two suffixes: *-iš* and *š*. As Table 11 shows, these two suffixes date back to Proto-Slavic. Similar pairs of comparative suffixes can be found in closely related Slavic languages, as Polish, Czech, and Slovak.

PS	OCS	Ukrainian	Polish	Czech	Slovak
*-jъs	-ъš	-š	-sz	-š	-š
*-ejъs	-ějъš	-iš	-ejsz	-ějš	-ejš

Table 11: CMPR suffixes in Slavic

3. The choice between *-š* and *-iš* is not phonologically conditioned

The following two sections provide support for the idea that the choice between the two comparative suffixes *-š* and *-iš* is not determined by phonology. Two main arguments will be presented in favour of it. Firstly, there are a number of adjectives that can take both the *-š* and *-iš* suffix in the comparative. Secondly, there are many cases where the phonological environment is very similar, and yet a different suffix is used.

3.1. Adjectives that can take both *-š* and *-iš*

There are about a dozen adjectives in Ukrainian that can appear with either the suffix *-š* or *-iš*. Some of these are provided in Table 12. There is usually a difference in meaning between adjectives within a pair. For instance, *bahat-iš-yj* usually denotes something material, meaning ‘richer’, while *bahat-š-yj* has a more abstract meaning ‘more diverse’.

	POS	POS translation	CMPR	CMPR translation
a.	bahat-yj	rich, diverse	bahat- iš -yj bahat- š -yj	richer more diverse
b.	hrub-yj	rude, fat	hrub- iš -yj hrub- š -yj	ruder, fatter fatter
c.	zdorov-yj	big, healthy	zdorov- iš -yj zdorov- š -yj	bigger, healthier healthier
d.	star-yj	old	star- iš -yj star- š -yj	older older, senior

Table 12: Adjectives that can take both suffixes

In contrast to the first example, *hrub-iš-yj* denotes a more abstract property, and apart from ‘fatter’ can also mean ‘ruder’, while *hrub-š-yj* only has a concrete meaning. In the third example *zdorov-iš-yj* can denote both the size and condition of something, ‘bigger, healthier’, while *zdorov-š-yj* can only mean ‘healthier’. The fourth pair has an interesting distinction, where *star-š-yj* along its main meaning ‘older’ has also developed the non-comparative meaning ‘senior’, while *star-iš-yj* only has the meaning ‘older’.

The examples presented in the table above demonstrate that certain adjectives can take both suffixes *-š* and *-iš*. We have one unique phonological environment and yet two different suffixes can appear. This shows that the choice between those two suffixes is not (purely) phonologically conditioned. The meaning of these two forms is slightly different, and it is not clear what triggers this semantic alternation. The main point is that there are these two possible forms. I put the question of the semantic differences aside for future research.

3.2. *The same phonological environment, different suffixes*

The second argument is that adjectives that present the same or very similar phonological environments can still take different suffixes. In order to demonstrate this, some minimal pairs are presented in Table 13.

	POS	CMPR <i>-š</i>	CMPR <i>-iš</i>	translation
a.	dešev-yj važlyv-yj	dešev-š-yj *važlyv-š-yj	*dešev-iš-yj važlyv-iš-yj	cheap important
b.	zdorov-yj krasyv-yj	zdorov-š-yj *krasyv-š-yj	zdorov-iš-yj krasyv-iš-yj	healthy beautiful
c.	star-yj prostor-yj	star-š-yj *prostor-š-yj	star-iš-yj prostor-iš-yj	old spacious
d.	duž-yj sviž-yj	duž-č-yj *sviž-č-yj	*duž-iš-yj sviž-iš-yj	strong fresh

Table 13: Adjectives with the same phonological environment

For instance, in the first example both adjectives have the same number of syllables, both have the stress on the second syllable, and both end in a fricative *v*, and still they take different suffixes: *dešev* can only take *-š*, and *važlyv* only *-iš*.

In the second minimal pair the number of syllables, the last consonant, and the stress are again the same, but *zdorov* can take both *-š* and *-iš*, while *krasyv* can take only *-iš*. A similar situation is found in the third pair, where both adjectives end in the alveolar *r*, but *star* can take both *-iš* and *-š*, while *prostor* can only go with *-iš*. In the fourth example both adjectives have the final fricative *ž*, but in the case of *duž* only *duž-č-yj*

is possible (recall from Section 2 that $-č$ is underlyingly $-š$), while with *sviž* only $-iš$ is possible. This is just a handful of such minimal pairs. They cast further doubt on an account in which the alternation between $-š$ and $-iš$ is phonologically determined.

In this section I have presented two arguments against treating the allomorphy between $-š$ and $-iš$ in phonological terms. Firstly, I presented adjectives that can take both suffixes. Secondly, I discussed examples where the phonological environment is very similar, and yet certain adjectives only go with $-š$, and others with $-iš$.

3.3. *The choice between $-iš$ and $-š$ is morphologically conditioned*

Caha et al. (2019) discuss Czech comparative adjectives, where the comparative is formed by adding either $-š$ or $-ějš$ suffixes. They claim that their distribution cannot be explained in terms of phonology, mentioning the examples in Table 14. In (a) both adjectives end in t , but differ in the suffixes they take. In (b) both of them end in r , and also take different suffixes.

	POS	CMPR	gloss
a.	bohat- y	bohat- š-í	rich
	kulat- y	kulat- ějš-í	round
b.	star- y	star- š-í	old
	bujar- y	bujar- ějš-í	merry

Table 14: Czech comparative adjectives

They claim that a phonological account of the distribution of these two allomorphs is unlikely: “[...] We will treat $-š$ here as a morphologically conditioned allomorph of $-ějš$ ” (Caha et al. 2019:473). Slovak comparatives are discussed in Vanden Wyngaerd et al. (2020). They claim that the distribution of suffixes $-š$ and $-ějš$ is phonologically governed. However, they also add: “...we do not rule out the possibility that there may be a morphosyntactic principle underlying the distribution of these allomorphs, as is the case in Czech”. Thus, it is likely that not only in Ukrainian, but also in other Slavic languages the distinction between the two suffixes is morphological.

Limitations of space prevent me from going into the details of the principles that regulate the distribution of the two suffixes. I will investigate Ukrainian comparatives along the lines proposed by Caha et al. (2019) for Czech taking into account the data from Vanden Wyngaerd et al. (2020) for Slovak. I shall discuss this in my future work.

4. Conclusions

In this paper I argued that there are two comparative suffixes in Ukrainian: the productive form *-iš*, and the non-productive form *-š*, where *-č* and *-šč* are phonologically conditioned allomorphs of *-š*. I presented the diachronic data from Bevzenko (1960) showing phonological processes of assimilation and dissimilation in Ukrainian comparative adjectives. I also presented two pieces of evidence suggesting that the distribution of the *-š* and *-iš* suffixes is not regulated by phonology. I suggested that their distribution in Ukrainian and other Slavic languages should be approached from a morphological point of view.

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