

BILL J. DARDEN

ON DISSIMILATIVE *JAKAN'E* IN RUSSIAN DIALECTS

A set of phenomena known as dissimilative *akan'e* [DA] and *jakan'e* [DJa] was once widespread in southwestern Russian dialects. These dialects survived well into the twentieth century. The phenomenon is obviously interesting, and there is extensive literature on the subject. Very good recent research by Knjazev (2001) and Savinov (2013) include a detailed review of the literature.

Zaxarova (1959) provides a good description of the phenomenon in several dialects with consistent (*posledovatel'noe*) *jakan'e* of the “archaic” type. In dialects of this type there are seven accented vowels. The system of accented vowels is:

high	i(i)	u
high-mid	ê	ô
low-mid	ẹ	o
low	a	

Dissimilative *akan'e* and *jakan'e* are found exclusively in the pretonic syllable. In unaccented syllables of *akan'e* dialects there are normally three distinctive vowels. They are generally /i, u/ and a non-high vowel. Dissimilation affects only the non-high vowel. In dialects with DJa we find /a/ before an accented higher vowel, and /i/ before an accented lower vowel. In dialects with DA we find [ə] before lower accented vowels, and [a] before accented higher vowels. Avanesov (1949, p. 59) describes this [a] as longer and more open than the [a] that occurs in pretonic position in standard Russian. There is dialectal variation as to what happened before accented mid vowels. In the “archaic” type, the division between higher and lower accented vowels is between the high-mid and the low-mid vowels; thus we get [ə] and /i/ before accented /a ọ ẹ/; [a] before the higher vowels. In a system where DA was absolutely regular, [a] and [ə] would be allophones.

A dissimilation of this type is historically hard to understand because it has no known articulatory or perceptual motivation. For the same reason these rules would be my best candidates for “unnatural” phonological rules in synchronic grammar.

For the historical problem, there is a path to the distribution of phonological segments that in the end justifies dissimilation in vowel height, but does not include a single change that is dissimilative in nature.

We will first look at the relationship between the two processes. Avanesov and Orlova (1964, p. 63) say that in the overwhelming majority of *akan'e* dialects with DJa, DA applies according to the same principle. They do not explain what they mean by “principle”. They do note that DA is less stable than DJa. Zaxarova says that in her dialects with regular dissimilative *jakan'e*, dissimilative *akan'e*

operates with the same rules. We can certainly postulate an initial stage when this was true. As she says, the two kinds of dissimilation must have the same ultimate source.

This claim (that DA and DJa operated by the same rules) is not supported in detail by actual data from observed dialects. There are three patterns reported for DA (Kuznecov 1973, p. 48–50). One is the “archaic” pattern described above. The other two variants treat high-mid and low-mid accented vowels the same. One treats the high- and low-mid vowels as higher vowels, so that the pretonic non-high vowels merge as [a]. The third variant, poorly attested and possibly nonexistent, treats both sets of mid vowels as lower vowels, so that before both sets the pretonic non-high vowels merge as [ə].

The same three variants are found in DJa before an unpalatalized consonant. When the pretonic vowel is between palatalized consonants there is more variation. One generalization that is valid for all variants is that when the results between palatalized consonants differ from those before an unpalatalized consonant, there are more cases between palatalized consonants where the neutralized pretonic vowel is /i/. Since the environment between palatalized consonants is a strong i-coloring environment, it seems likely that most of the differences are due to assimilative changes conditioned by the environment.

For DA the crucial change is the change of the previously existing non-high vowel to [ə] in certain unaccented syllables. The realization of this vowel as [ə] in some unaccented syllables is very common in akan'e dialects and in the literary language, and it is never treated as raising. It is called vowel reduction. Vowel reduction is linked to the shortening of the vowel. The oddity about these dialects is that there is reduction in pretonic position.

Avanesov (1949, p. 68–69) does treat this change as vowel reduction. He uses a term called *polnovestnost'*, the basic parameters of which are duration and volume, and says that the *polnovestnost* of the pretonic [ə] is similar to that of [ə] in post tonic and pre-pretonic position. Avanesov's suggestion that a rhythmic pattern within the word provided the impetus for this development has been greatly expanded by Savinov (2013, Chapter one.)

It seems that DA involves shortening of vowels before lower accented vowels, with automatic raising, not from raising the tongue, but from raising the lower jaw. There is a characteristic of lower vowels which can help us understand the causal conditions. In languages of the world, low vowels are typically longer than high vowels. If these dialects evolved with a rhythmic pattern whereby pretonic vowels were adjusted in duration to compensate for differences in the duration of the accented vowel, this would result in shorter vowels before low vowels and longer vowels before high vowels. Knjazez (2001, p. 18–29) presents this argument very clearly and gives credit to Brok (1916, p. 57–59) for first suggesting this solution.

If DJa originally had the same pattern as DA, we could derive the *jakan'e* pattern by an assimilative sound change of [ə] to /i/ in pretonic position after a palatalized consonant. Undoubtedly there had always been some assimilation. After a palatalized consonant, the fully reduced vowel is normally transcribed as *ɪ* by Russian phoneticians. I will use the symbol *ɪ*. Thus we have two changes: the reduction of a non-high vowel in unstressed syllables and the assimilation of a reduced vowel to a preceding palatalized consonant, both of which are common in Russian dialects, but with more specific environments in these dialects.

This proposal works very well for accented /a/ and the high vowels, but there are problems with the mid vowels. We do not know whether they followed the gradient of longer duration with lower vowel height when DA arose or how much they differed from each other. Most importantly, if there are four vowel heights with a gradient in length, there should have been a similar gradient of values for the duration of the pretonic non-high vowel. Two values survive: *a* and *ə* (*a* and *i* after a palatalized consonant.) Any attempt to account for this must be speculative. I will assume that there was a clear [a] before high vowels and a clear [ə] or [ɪ] before /á/. The *a/ə* variation was technically allophonic, but since both appeared in pretonic position they must have been perceptually distinct. Between them there could have been other realizations of the non-high vowels. The duration of accented vowels would vary with speakers and circumstances, so there would probably be a continual gradation in duration with two clusters. As noted, Avanesov says that the pretonic [a] was lower and longer than the [a] in standard Russian. This indicates that there was not only shortening before /á/, but lengthening and lowering before high vowels. Without any evidence except for the final result, one could propose that polarization, along with the general restriction of oppositions in unaccented syllables, resulted in the reduction of the four potential values to two.

In this paper I will focus on *jakan'e* and the change of the reduced vowel to /i/. Vowel reduction and the assimilative change of the reduced vowel to /i/, applied in order, produce the appearance of dissimilation in vowel height. The surface data then justify a phonological rule for DJa. This rule could be learned by children and consistently applied. It would be more stable than DA because it is a clear alternation of independent phonemes.

It is strange to apply neogrammarian methodology to allophones, but if we do compare the pretonic vowels in the various dialects (from Kuznecov 1973, p. 50–59) we get interesting results. For the environment between palatalized Cs:

Accented V	high	high-mid	low-mid	low
Obojanskoe	a	a	i	i
Ščigrovskoe	a	a	i	i
Žizdrinskoe	a	a	a	i
Donskoe	a	i	i	i
Dmitrievskoe	a	i	i	i
Suždanskoe	a	i	i	i

For the environment between a palatalized and a nonpalatalized consonant:

Accented V	high	high-mid	low-mid	low
Obojanskoe	a	a	i	i
Ščigrovskoe	a	a	a	i
Žizdrinskoe	a	a	a	i
Donskoe	a	i	i	i
Dmitrievskoe	a	a	i	i
Suždanskoe	a	a	a	i

If we assumed that everything was determined by phonetics, the comparative method would justify four entities. I will label them as *1, *2, *3, *4. Hypothetically, *1 would occur in pretonic position before high vowels, *2 before high-mid, *3 before low-mid, and *4 before low. Although the only surviving realizations are /a/ and /i/, each proto-vowel exhibits a different distribution:

1 and 4 yield /a/ and /i/ respectively.

2 yields /i/ before palatalized consonants in Donskoe, Dmitrievskoe and Suždanskoe and before unpalatalized consonants in Donskoe; /a/ otherwise.

3 yields /a/ before palatalized consonants in Žizdrinskoe, and before unpalatalized in Žizdrinskoe, Ščigrovskoe, Suždanskoe; /i/ otherwise.

The argument for reconstructing four phonetic segments is not substantially different from arguments for reconstructing three series of velars in Proto-Indo-European. Many people doubted that solution until three distinct realizations were found in Anatolian (Melchert 1987).

The main problem for this reconstruction is that it is exclusively phonetic. Another possible problem is that it assumes that all the dialects started from the same system. Phonology clearly did affect the results of dissimilative jakan'e, since all but one dialect exhibit /i/ between palatalized consonants before both sets of mid vowels. That is unlikely to be the sole answer.

For some systems, a reasonable alternative might be to assume that the "archaic" pattern is the original one and the varied behavior before mid vowels is the result of the loss or endangerment of the distinction between the high-mid and the low-mid accented vowels. Knjazev (2001) argues effectively against this as a broad solution. However, it has been proposed for Ščigrovskoe jakan'e (Požarickaja 2018, p. 80). This variant arose within areas with the archaic pattern. It differs from the archaic pattern only by generalizing /a/ before mid vowels followed by an unpalatalized consonant. Savinov (2013, p. 199) says that the Ščigrovskoe, Dmitrievskoe, and Suždanskoe systems can be traced to the degradation of the archaic pattern.

He refers to Zaxarova's kandidatskaja dissertacija for evidence that Suždanskoe may have once had the archaic pattern. The evidence that he cites from Suždanskoe jakan'e is interesting. According to the pattern cited above, it should have /i/ between palatalized consonants before all mid vowels and /a/ before unpalatalized consonants plus mid vowel. Words like *z'aml'oj*, *b'al'jo* violate the

rules for the dialect and are like words in the archaic dialect, but the /a/ is there because of the analogical treatment of the ending. The locative ending *-e* from *-ê* palatalizes the stem-final consonant. On page 214 Savinov cites variant locatives with the preposition *v* 'in': *v v'adré*, *v s'alé* and *v r'aké*, presumably from *v'adró* 'bucket', *s'aló*, *riká* (literary *vedro*, *selo*, *reka*). On the previous page he cites loc. *s'ilé*. (The failure to indicate palatalization before the *-e* is a simple oversight.) These are all stems whose basic form ends in an unpalatalized consonant. The question is whether the forms with C'aC'-e are archaisms, showing an older pattern, or are innovations, leveling the vowel to the one expected before the basic unpalatalized consonant. Isolated expressions meaning 'in the bucket', 'in the village', 'in the river' would be good candidates for archaisms.

When a dialect has a single vowel before all mid vowels, either /a/ or /i/, and that situation arose from morphological leveling, there should be traces of the older system. This should be particularly clear when the archaic pattern with /i/ before low-mid vowels was replaced by /a/ before all mid vowels. Alternations can be leveled only where there is an alternation. There would be disyllabic stems with an accented low-mid vowel in the second syllable and a non-high vowel in the first in which the environment never changed. Examples from Zaxarova (1959) are: *r'ib'ónak*, *d'ir'éwn'a*, *b'ir'óza*, *v'ir'ówka*, *p'iškóm*. All five originally had *e* in the first syllable, but there is no alternation, because the following vowel does not change. If speakers did not know the spelling in the literary language, they would not know that the /i/ is the product of DJa. Original *i* does not alternate, and these words should have been interpreted as having underlying *i*. Articles on DJa do not have lists of words with original pretonic *i*, but there would be many. If the alternation between /a/ and /i/ were leveled to /a/ before all mid vowels, then only words with the alternation would be affected. The nonalternating /i/ would remain. It is words like *rebēnok* that linguists should look for to determine the history of these dialects.

A similar argument can be made for dialects with /i/ before all mid vowels. It is not as neat, because there was no original nonalternating /a/ in the system. There were words with actual nonalternating /a/. I know of no way to get /i/ in such words except via a sound change of the non-high vowel to /i/ in that environment. For Dmitrievoe, Savinov (2013, p. 209 and 211) cites nonalternating words *nab'is'édavat'*, *t'il'éga*, *n'iv'éstkoj*, from *nabesédovat'*, *telēga*, *nevēstka*. Attested forms from an "archaic" dialect: *t'al'éga*, *n'av'éskə* (Zaxarova 1959, p. 11).

It is important to remember that when we are discussing differences in what reduced vowels are subject to assimilation to /i/ between palatalized consonants, it is the vowel undergoing the change that is different. If the raising and fronting is phonological, we should be talking about real physical differences in the unaccented vowels before the change. The conditioning factor for these differences (the duration of the accented vowel) is irrelevant.

I have not yet discussed a seventh variant of DJa. The Mosal'skoe or Vitebskoe *jakan'e* (Kuznecov 1973, p. 56) does not fit neatly into the patterns out-

lined above. As in all DJa dialects, we find /a/ before accented high vowels and /i/ before accented /a/. In these dialects before an unpalatalized consonant (which can be followed only by /ô, ɔ/) the pretonic non-high vowels go to /a/. Between palatalized consonants we find /a/ before low ɔ, but /i/ before accented /e/ and /ê/. (The high /ô/ did not naturally occur after a palatalized consonant.) An obvious generalization would be that this is raising and fronting before front unrounded vowels, but, as noted, we find /a/ before accented /i/. It is certainly reasonable to expect /i/ to have a greater raising and fronting effect than mid front vowels. If we start from the archaic pattern, with /a/ before high and high-mid vowels, then /a/ would have already existed before both /i/ and /ê/. We are left with the problem of explaining why one was affected and not the other.

We have a similar problem in Donskoe and Dmitrievskoe jakan'e, where we find /i/ between palatalized consonants before all mid vowels. If we start from the archaic pattern, which would have /a/ before high-mid vowels, we have no phonological reason why this *a would change to /i/ when the /a/ before high vowels was unaffected in the same environment. The most logical answer is that there was a phonetic difference between the vowel before /i/ and the one before /ê/. At the beginning of the process the vowel before /i/ (the shortest vowel) would have been longer than the vowel before /ê/, and presumably lower.

We thus have a reason to reconstruct a difference between the non-high vowel before /i/ and the vowel before high-mid vowels. The development of the archaic pattern requires that we recognize a phonetic difference between the non-high vowel before the high-mid vowels and that before the low-mid ones. For Žizdrinskoe, with a change to /i/ only before /a/, we require a phonetic difference between the non-high vowel before accented /a/ and that before low-mid vowels.

Why do we start from the archaic pattern, or any specific pattern? We can start from an earlier stage. The earliest stage would be when there were three distinctive phonemes in pretonic position: /i, u/, and a non-high, unrounded vowel whose pronunciation could vary with environment.

1) A broad range of dialects developed a pattern whereby the duration of the pretonic non-high vowel was negatively coordinated with the duration of the accented vowel. This vowel could range from slightly raised [a] to [ə] after an unpalatalized consonant, from slightly fronted raised [a] to [ɪ] after a palatalized consonant.

2) Between palatalized consonants the remaining allophones of the non-high vowel were raised and fronted, merging with /i/ at the top of the range, with dialectal variation as to how far along the duration gradient (short to long) the change to /i/ took place. A similar change to /i/ took place between a palatalized and a non-palatalized consonant, but with a more restricted distribution.

3) All the non-high vowels that did not change to /i/ were still allophones of /a/ and could easily move toward the lower [a] that occurred before high vowels.

4) All the allophones of /a/ became longer and lower.

Does this mean that I have justified the reconstruction of a stage when there were four identifiable allophones of /a/ in pretonic position? I think that I have provided evidence that dialect differentiation began in DJa at a stage when the pretonic non-high vowel exhibited allophonic variation in duration in a gradient from the duration of slightly fronted [a] to that of [ɪ]. The values of duration along that gradient were probably not evenly distributed. Various dialects in different environments made different binary cuts in that gradient. Taken together there were three cuts that form potential boundaries of four possible segments in the gradient. Those segments are correlated with four vowel heights in the following accented vowel. That does not mean that the realizations of the non-high vowel within those parts of the gradient were perceived as distinct segments before the cuts.

So far I have discussed the origin of the changes in the pretonic vowel. DA and DJa both start from vowel reduction. There are differences in the final results, but that is no surprise. There is no reason to expect that a reduced vowel would act exactly the same after a palatalized consonant as it would after an unpalatalized one.

After the changes the system for DJa was very different. Vysotskij (1977, p. 55) notes that in pretonic position the duration of [ɪ], the back variant of /i/, is not different from that of [ə]. If this was true of the whole dialect area, the rhythm of the words was not affected. However, the alternation was now between a high vowel and a low vowel. There was now dissimilation based on vowel height, and the rule was no longer connected to vowel reduction.

One effect of the reorganization of the phonology may have been a reinterpretation of DA, treating it as dissimilative as well, and enhancing the status of [ə] as a distinct phoneme. Since the new phonological rule was in my opinion unnatural, it should have been prone to morphologization. The change was regressive, so the presence of the alternation signals something about the following accented vowel. It can easily become a signal of both the vowel and the morpheme that contains it. The morphemes *-o* nom/acc sing neuter, *-oj* inst. sing. fem., *-ov* gen. pl. masc., and *-ov* possessive adj. all had a high-mid /ô/ when accented. After a palatal consonant the *o changed to /e/, then, in a mixture of phonological and analogical change, back to /o/ (ë). While /o/ from *e does not regularly act like a high-mid vowel, it does in these morphemes. Zaxarova (1959, p. 14) notes that the a/ə alternation in her dialects has the same morphological behavior, which adds to the argument that ə had become a phoneme.

BIBLIOGRAPHICAL ABBREVIATIONS

- Avanesov 1949 = R. I. Avanesov, *Očerki russkoj dialektologii*, Moscow, Učpedgiz, 1949.
 Avanesov and Orlova 1964 = R. I. Avanesov and V. G. Orlova, *Russkaja dialektologija*, Moscow, Nauka, 1964.
 Brok 1916 = O. Brok, *O govory k zapadu ot Mosal'ska*, Pg. (as cited in Knjazev 2001), 1916.

- Knjazev 2001 = S. V. Knjazev, *K istorii formirovanija nekotoryx tipov akan'ja i jakan'je v russkom jazyka*, in „Voprosy russkogo jazykoznanija”, IX, 2001, p. 8–42.
- Kuznecov 1973 = P. S. Kuznecov, *Russkaja dialektologija*, Moscow, Prosveščenie, 1973.
- Melchert 1987 = H. C. Melchert, *PIE velars in Luvian*, in Calvert Watkins (ed), *Studies in Memory of Warren Cowgill (1929–1985)*. Papers from the Fourth East Coast Indo-European Conference Cornell University, June 6–9, 1985, Berlin – New York, de Gruyter, 1987, p. 182–204.
- Požarickaja 2018 = S. K. Požarickaja, *Russkaja dialektologija*, Moscow, URSS, 2018.
- Savinov 2013 = D. M. Savinov, *Ėvoljucija sistem vokalizma v južnorusskix govorax*, Moscow, RAN, 2013.
- Vysotskij 1977 = S. S. Vysotskij, *K voprosu o dissimiljativnom principe vokalizma*, in S. S. Vysotskij, *Ėksperimental'no-fonetičeskie issledovanija v oblasti russkoj dialektologii*, ed. Moscow, Nauka, 1977, p. 53–59.
- Zaxarova 1959 = K. F. Zaxarova, *Arxaičeskie tipy dissimiljativnogo jakan'ja v govorax belgorodskoj i voronežskoj oblastej*, in „Materialy i issledovanija po russkoj dialektologii”, new series, vol. 1, 1959, Moscow, ANSSSR, p. 8–55.

ON DISSIMILATIVE JAKAN'E IN RUSSIAN DIALECTS

(Abstract)

Dissimilative *jakan'e* in SW Russian dialects applies to nonhigh vowels in pretonic position. One finds /i/ before accented low vowels, /a/ before accented high vowels. We can explain the phenomenon without dissimilation. There is vowel reduction (shortening) before lower relatively longer accented vowels, followed by a change of the reduced vowel to /i/ after a palatalized consonant. All these dialects originally had seven vowels, four vowel heights. There is significant dialectal variation in the treatment of the nonhigh vowel before accented mid vowels and the influence of surrounding palatalized consonants. To account for all the variants, we must start from an early stage when there was continuous gradient of duration in the pretonic vowel, negatively correlated with the duration of the accented vowel.

Keywords: *Russian, dialects, dissimilation, unnatural, history.*

Cuvinte-cheie: *limba rusă, dialecte, disimilare, nenatural, istorie.*

University of Chicago
 Departments of Slavic Languages and Linguistics
 5801 S. Ellis Ave. Chicago, IL 60637
 USA
 11505 Cedar Lane
 Ashland, VA 23005
 USA
 bdarden@uchicago.edu