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The First Slavs in the Russian Northwest and the Second Velar Palatalization

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Abstract

This birthday greeting for Tore Nesset examines the evidence for the Second Velar Palatalization (VP2) in the medieval Pskov–Novgorod area. It is assumed that this matter is sufficiently interesting to justify an approach that does not try to explain the 'missing sound change' in isolation. Hence it is viewed first in the perspective of velar palatalizations in general; then in relation to other notable grammatical features of these dialects; and finally in the light of the reconstructed social context in which this phonological change occurred. The exposition leaves aside the debates about individual issues in order to create a coherent account that is consistent with changes in other languages.

1. Introduction

It has been said that the greatest discovery in twentieth-century Slavic linguistics was the absence of the Second Velar Palatalization (VP2) in the Russian Northwest.[1]

Scholars had long noted the complete lack of VP2a reflexes in inflection in northern dialects, in stark contrast to their consistent use in medieval texts. But this was really not surprising: Alternations in inflection tend to be leveled, and VP2a reflexes were in evidence at the beginning of words. Lexemes like *cena*, *celyj*, *cerkov'* showed the diachronically expected initial.

[1] The second palatalization (VP2) affected velars in three environments, a, b, and c; see (1abc). This paper deals with them all, but the relationship between VP2ab and VP2c—by some thought of as the third palatalization (VP3)—plays a special role. On the controversies surrounding these changes, see Vermeer (2003); Nesset (2015: 238).

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But then in 1964, at a conference on Pskov area dialects, Sof'ja Mendelevna Gluskina presented lexical evidence from folk dialects that could only be interpreted one way: Localisms that were limited to oral usage showed no evidence of VP2a even in initial position; see (1ab). Some lexemes in these dialects that had initial /c/, like corresponding standard Russian forms, were easily interpreted as adoptions from general Russian usage (1a) (Gluskina 1966, 1968).

Gluskina's data and her rational interpretation were immediately convincing, though they did meet with some resistance (Popov 2023: 919). A few years later, similar examples of unchanged initial velars in the VP2ab environments came to light in Novgorod birchbark texts, the earliest from the 1000s (Zaliznjak 1982; 2004: 41). There could be no doubt: The dialects of Pskov and Novgorod originally had no evidence of the regressive palatalization of velars before the reflexes of PPS /ai/ (VP2a) or PPS /w/ followed by front vowel (VP2b). The progressive palatalization (VP2c) was well attested but limited: It apparently affected /k/ but not /g/ and /x/. As for /g/, only a single lexeme is certain, two other lexemes are with the VP2c reflex; but it is likely they were not native to these dialects (1c).[2]

(1) a. VP2a. • Pskov dial. *k'ep*, *kepók*, *k'ep'éc* || Russ. *cep* 'flail', Pol. *cepy* (PPS kaipa-). • Pskov dial. *k'évka*, *k'evcá*, *k'evína*, *k'évočka* || Russ. *cevka* 'bobbin', Pol. *cewa* (PPS kaiwi-). • Pskov dial. *k'ed'it'*, *k'ed'ílka*, *k'éž* || Russ. *cedit´* 'strain', Pol. *cedzić* (PPS kaidī-).
Birchbark texts: кѣле || Russ. *celyj* 'whole', P *cały* (PPS kaila-). • хѣрь 'undyed woollen cloth' || Russ. *seryj* 'gray', Pol. *szary* (PPS xaira-, xairi-).

b. VP2b: • Pskov dial. *kv'et*, *kv'et'ét'*, P *kwiat* || Russ. *cvet* 'bloom', Ukr. *kvit*, *cvit* (PPS kwaita-). • Pskov dial. *kv'elit'* 'tease' || ORuss. *cvěliti* 'torment' (PPS kwailī-).
• Nw.-Russ. dial. *gvirsta* 'gravel' || Russ. *dresva*, Pol. *drząstwo*. • Nw.-Russ. dial. *gv'ezda* 'star', Pol. *gwiazda* || Russ. *zvezda*, OCS *zvězda* (PPS gwaizdā-).

c. VP2c: PPS /k/, • Nw.-Russ.: *ot'ec*, *jajco*, *ovca, kur'ica*, *dv'erca* 'father, egg, sheep, chicken, door dim.'(PPS -ika-, -īkā-). Birchbark texts: отьць 'father', вѣвериць 'squirrels', мѣсѧць 'month'.
• PPS /g/, Birchbark texts: не лего (for льго) 'forbidden'; кнѧзь 'prince' (PPS kuninga-), оусерѧзи 'earrings' (PPS auseringa-, Gmc. *ausi-hringa-).
• PPS /x/, Russ. *ves´*, *vse*. Birchbark texts: e.g., вхоу, къ вхем <-ěmъ>, вохе <vъхе>, вохо <vъхо>, вхого, со вхим[и], на вхыхъ 'whole, all' (PPS wixa-).

[2] Notational conventions. Cited wordforms are in italics. Proto-Slavic (PS) forms are based on comparative reconstruction; they are asterisked and in italics. Pre-Proto-Slavic (PPS) forms are based on internal reconstruction of Proto-Slavic wordforms; they are in normal font and labeled PPS. Proto-Slavic forms reflect a prehistoric stage close to Old Church Slavonic, Pre-Proto-Slavic forms, a stage before the First Velar Palatalization. In the text, Cyrillics are rendered in transliteration with the exception of wordforms cited from the birchbark corpus.

In the pages that follow we will look at this remarkable detail in the history of Russian from several points of view: First in comparison with other velar palatalizations (§2), then in relation to other peculiarities of the traditional Pskov-Novgorod dialects (§3). After a brief look at some rudimentary information on the likely social context in which VP2 occurred (§4) a new interpretation of the missing evidence for VP2 will be presented. The conclusion (§5) states some of the methodological choices implicit in the analysis and interpretation.

2. On velar palatalizations

In any attempt to interpret a sound change it is useful to know that distinctive elements (segments or features) arise through reanalysis of allophonic variants, and allophones are created by reanalysis of mere phonetic fluctuation ('free variation'); the fluctuation is typically fine-grained and—until it becomes regularly conditioned—below the level of speakers' attention, let alone interest. Allophones are established gradually. In the case of velar palatalization, phonetician dialectologists record degrees of sharping[3] (e.g., [k′ k″]) leading to the potentially distinctive (IPA) [kʲ, gʲ, xʲ]. Besides the articulatory gradualness, the development of sharping is also gradual among the members of the class of velars, and across their phonological and morphotactic environments.

The gradualness in these contexts is observable (cf. Timberlake 1978ab), but it can also be inferred in diachronic change. This happens when a gradual allophonic development is cut short by a phonological reanalysis that captures only part of the full range of (possible) allophones. Here follow some examples from three dimensions of gradualness, concurrent features, contiguous features, and morphotactics.

2.1 Concurrent segmental features

1. Among velar obstruents, plosives are sharped earlier than non-plosives, for /k/, /g/ are produced with velar contact, /x/ is not; the tense (voiceless) /k/ is sharped earlier than the lax (voiced) /g/, for /k/ has a larger and longer velar contact than /g/. (i) Hence /k/ > /g/ > /x/ is the gradation reflected in VP2c: When [kʲ] was reanalysed as /kʲ/, /g/ and /x/ were not yet so strongly or consistently sharped that they could be reanalysed. (ii) Similarly, the Polish Fourth Velar Palatalization (VP4) resulted in /kʲ gʲ/ vs. /x/ before /i/: nom.sg.m *cienki* 'thin', *ubogi* 'poor' vs. *suchy* 'dry'; and before /e/: nom.sg.n *cienkie*, *ubogie* vs. *suche*. (iii) In East Slavic, the regressive VP4 affected all the velars in the entire Russian language area; e.g., ORuss. *ky*, *gy*, *xy* with [kʲ, gʲ, xʲ] in

[3] In velars, sharping (in musical notation: ♯) is the raised pitch of a plosive or fricative that results when its point of articulation (area of contact) is advanced toward the palate. Additional fronting produces dorso-palatal plosives IPA [c ɟ]; a slow release of these results in assibilated alveo-palatal [tɕ dʑ].

Russ. st. *kislyj* ‘sour’, *gibkij* ‘flexible’, *xitryj* ‘sly’; similarly *kě*, *gě*, *xě* in Russ. st. *ruke* ‘hand’, *noge* ‘foot’, *strexe* ‘eaves’. But the progressive part of VP4 is limited to the plosives, /k/ in the southeast and /k/, /g/ in the north (e.g., dial. *l’ul’k’a* ‘cradle’, *mal’en’k’aj* ‘small’, *dočˈk’a* ‘daughter’, *Olˈg’a*), whereas /x/ and the southern fricative /ɣ/ did not become sharped (e.g., *Olˈya*; Kasatkin 1999: 92; Avanesov & Orlova 1964: 74; Orlova et al. 1970: 54, map 4).

2.2 Contiguous segmental context

1. Sharped allophones develop earlier directly preceding a front vowel than when separated from a front vowel by another segment. This is exemplified by VP1 and by the characteristic West Slavic VP2a and no VP2b (e.g., Pol. *caly* ’whole’ vs. *kwiat* ‘flower’, *kwielić* ‘whimper’; contrast R *celyj*, *cvet*; recall that VP2b applied before all front vowels; cf. (1).

2. Sharped allophones develop earlier contiguous to higher than to lower front vowels; this is illustrated by the progressive VP2c.

3. Sharped allophones develop earlier preceding than following a front vowel; this is exemplified by the regressive VP1 vs. the regressive and progressive VP2ac. Similarly in Russian: VP4 before front vowels occurred throughout the language area, but sharped velars after sharped (fronted) consonants arose only in limited northern and southeastern areas.

4. In progressive palatalization there may be additional conditioning of intersyllabic velars. Note that VP2c was barred before a high back vowel (ORuss. *kъnjazь* ‘prince’vs. *kъnjagynja* ‘princess’, PPS kuninga- vs. kuningūnjā-)

2.3 The morphotactic context

Sharped allophones develop earlier in uniform environments than in alternating environments. Thus Polish dialects with incomplete VP4 had word-initial sharped [kʲ] but plain [k] before desinential or mobile /e/, e.g., dial. *kiedy*, but *bokem*, *łokeć* for standard *kiedy* ‘when’, *bokiem*.ins.sg ‘side’, *łokieć* ‘elbow’ (Timberlake 1978b). The same contrast can be seen in VP2a: Contrast the outcomes both word-initially and stem finally in Ukrainian (*cina* ‘price’, *ruci*.dat.sg ‘hand’) vs. Russian (*cena*, *ruke*), where VP2a allophones were reanalysed and assibilated word-initially but not reanalysed stem-finally.

A little knowledge of how velar palatalizations develop—the allophonic changes that precede reanalysis and the systematic relations of implication expressed in the several dimensions of gradualness—gives us a more nuanced view of the Pskov–Novgorod data. True enough, the absence of VP2ab reflexes in the lexical data is a real deviation from the normal situation. It is obviously compatible with the conclusion

that there was no VP2ab (though to be really sure, we would want to find a convincing explanation for its absence).

On the other hand, the fact that progressive palatalization is regularly secondary to a regressive palatalization should make us wonder if the attestation of VP2c in Pskov–Novgorod might count as circumstantial evidence, an indication that actually there was also at least a VP2a.

Maybe our question should not be Why was there no VP2a, but Why don't we have any evidence of it? The matter clearly deserves a second look.

3. Some morphological details

The attestation of the 'Old Novgorod' dialect in the birchbark corpus shows us a dialect of medieval Russian with several peculiar deviations from regular Old Russian morphology. Perhaps some of these can help shed light on the 'missing VP2ab'.

Nom.sg of o-declension nouns, short adjectives, and participles, including l-forms, is *-е* (-е); e.g., *брате* 'brother', *вънуке* 'grandson', *кѣле* 'whole', *дале* 'gave'. In definite adjectives the ending is (*-*e*=*j*-*ь* >) *-еі* (-еи). The nom.sg *-е* is well attested throughout the birchbark corpus.

Nom.sg *-е* has attracted a great deal of interest (Zaliznjak 2004: 99; Igartua 2005:105; Olander 2015: 104; To appear). The simplest account posits a change of PPS -as > -ə (Zaliznjak 1988: 170; Olander 2012:330). Nom.sg *-е* did not condition stem-final VP1 reflexes; this suggests it was established after VP1. The inherited *-е*.voc.sg ending, which did condition stem-final VP1 reflexes is barely attested in the birchbark corpus (Zaliznjak 2004: 145).

The gen.sg of a-declension nouns is *-ě* (-ѣ); contrast ORuss. *-y*/*-ě*, OCS *-y*/*-ę*. Until the 1300s, gen.sg *-ě* is usual, the regular ORuss. *-y* is occasional (Zaliznjak 2004: 97). The reconstruction of the general Slavic desinence allomorphs seems to call for combinations of phonological and analogical changes; but the Nw-Russ. *-ě* may be the outcome of a phonological change parallel to the nom.sg *-е*: PPS -ās >-ə̄ > *-ě*). (Igartua 2005: 199; Olander 2015: 130; To appear).

Loc-dat.sg of a-declension nouns is *-ě* (-ѣ); contrast ORuss., OCS *-ě*/*-i* (Zaliznjak 2004: 97).

Nom-acc.pl. of a-declension nouns. In the earliest texts, *-ě* predominates and the regular OR *-y* is uncommon. The nom.pl of o-declension nouns is first attested as *-i*, from the 1100s also *-y*; from the 1300s *-ě*; thus also in l-participles. Nouns in *-ane* > *-aně*. Acc.pl of o-declension nouns is *-y*, from the 1100s also *-ě* (Zaliznjak 2004: 98).

Pres.3. Zero ~ *-tь* vs ORuss. *-tь*. The latter gains in frequency from the 1300s, but the original semantically conditioned pres.3 distinction survives into some modern northwestern dialects: *-tь* appears neutral, but it is frequently omitted in conditional and purpose clauses (Zaliznjak 2004: 135 with references).

These morphological features suggest the early Pskov-Novgorod dialect's origin as a variety of Common Slavic that developed in relative isolation from the mainstream. This may have happened in its modern location or somewhere else prior to its speakers' settling there. Three details stand out.

First the nom.sg.masc *-e*. If this was the outcome of a phonological change subsequent to VP1, it was originally a minor feature, a variant of the majority ending *-ъ*. But it defined the dialect as distinct from all other known varieties of Common Slavic.

Secondly, the a-declension forms. If Zaliznjak's etymology of the gen.sg. *-ě* is valid, the resulting lack of allomorphy in gen.sg may have motivated the leveling of the loc-dat.sg. allomorphy (*-ě/-i* > *-ě*). This minor morphophonemic simplification resulted in a parallel syncretism between a-declension and i-declension unique in East Slavic.

Thirdly, the zero third-person markers. East Slavic dialects present a variety of patterns of *-0/-t* distribution conditioned by conjugation class, number, and stress placement. They look like compromises between the invariant *-t* of some dialects (and standard Russian) and the consistent zero typical of West and South Slavic. But the Northwest dialects put them in a different light; their semantic distinction may be an archaism from Indo-European times.

The morphological features are instructive. The nom.sg *-e* seems to reflect a time after VP1. But the third-person desinences take us back to a distant stage of Common Slavic. It makes us wonder where these Slavs could have come from. It invites us to consider the social context in which our VP2 occurred; perhaps this will help us get a better grip on the matter.

4. The social context

For the social context of the VP2 change we turn to the Velikaja River basin and evidence of its early settlement. Our information comes mainly from two disciplines, archaeology and linguistics.

The chief archaeological evidence is the long barrows (R *kurgany*), a remarkable feature of the Pskov countryside (Sedov 1994: 296-304; 2002: 348-372; 2005: 117-128). The urns deposited in the barrows are heterogeneous and give evidence of diverse funeral customs, Finnic, Baltic, most conspicuously some Jatvingian stone-covered urns, and Slavic. They reflect a population that for a long time comprised several cultural groups.

The collateral finds include B-shaped, riffled belt buckles. The archaeologists ascribe these to Slavs because of their distribution in northern Europe, south of the Baltic Sea. They were fashionable around 500 CE; their popularity and their date are confirmed by the tokens that have been found in southern England, presumably

brought there by migrating Angles and Saxons in the 450s-500s. Other artifacts reflect a simple slash-and-burn agriculture.

Three sorts of linguistic evidence are available. First, there are several names of streams in the Northwest that repeat hydronyms in the Nëman/Nemunas basin, unmistakable evidence of the presence of East-Baltic settlers (Ageeva 1974).

Secondly, there are Slavic loanwords in Finnish, Karelian, and Vepsian. They have been known since the early twentieth century, but they present a paradox that was first noted by Bjørnflaten (2006): Although there is plenty of evidence that the Slavs spread gradually from south to north across the Dnieper river system (Sedov 1981), the most archaic of all the Slavic loanwords in the neighboring languages are the northernmost, Finnic ones.

They reflect the vocalism of Pre-Proto-Slavic, /i u e a/ and its oral, nasal, and liquid diphthongs, and a few attest to the VP1 (Kallio 2006). By their archaic phonology they invite the inference that the Northwest was settled by Slavs that followed a migration route west of the Dnieper River system, across the Nëman/Nemunas valley, up through the Lithuanian hill country to the Daugava/Western Dvina valley and into the Velikaja basin.

To the Finnic groups that adopted this vocabulary the settlers became known as *venäjä*, now 'Russian' (OFi. *venädä*, PPS *weneda-*, PS **Venedi*) (Xaburgaev 1980:103). The Venedi were an ethnic group, probably originally Celtic (Gvozdanović 2009). They were well known to ancient geographers (Plinius, Tacitus); they were identified as Slavs and figured prominently in Jordanes' *History of the Goths* (500s) and the *Fredegar Chronicle* (600s) (Gindin et al. 1991; Ivanov et al. 1995). Their western, Germanic contacts used their name, Gm. *Wenden* (var. *Winden*), for all the Slavs. Like many other ethnic groups that adopted Slavic speech and ways (e.g., Antes, Avars, Dudlebi), some time after their integration the Venedi gave up their ethnonym.

The Slavicized Venedi played a central role in the development of the iron industry in Poland in the early centuries CE and in the geographical dissemination of iron making among the northern Slavs. There is linguistic evidence that suggests they brought iron making to the Northwest. The most striking is perhaps the word for 'blacksmith' (PS **kuznьcь* 'artisan'). As a lexeme, this is now general Russian. But the 550 placenames derived from it (*Kuznec*, *Kuznecovo*, *Kuzneck*, and another 26 derivatives) are strictly North Russian, distributed from Pskov in the west to the Kirov region in the east, with particular density (ca. 170 placenames) in the earliest settled territories, Pskov and Old Novgorod.[4]

Taken together, these odds and ends of information indicate that around the middle of the first millennium the Pskov area was a destination for Slavic and Baltic settlers

[4] In Middle and Southern Russia, Belarus', and Ukraine, some 420 placenames are derived from PS **koval'ь* (e.g., *Kovali*, *Kovalevo*, *Kovaleviči*, *Koval'skoe* and 27 other derivatives), as are their counterparts in Poland. They imply two major propagation routes for iron-making in the early Middle Ages (Andersen: To appear).

from the south. Here they encountered a local Finnic population. Finns and Balts adopted Slavic speech, and in time their varied cultural patterns were integrated. At a later point, yet another process of integration occurred, perhaps following the northward expansion of the Kriviči, Slavicized Balts (Xaburgaev 1979) from south of the Western Dvina.

5. The Second Velar Palatalization

We can now piece together some understanding of the Common Slavic dialect that was brought to the Velikaja basin.

The fact that the Pskov dialect had the nom.sg in *-e* tells us a few things about its diachronic background.

It had gone through a shortening of three-mora diphthongs and had maximally bimoraic diphthongs, oral, nasal, and liquid (Bethin 1998: 28). It had begun the reduction and loss of coda obstruents, the next step in its metrical development (ibid. 38). In this process, vowels preceding final obstruents had reduced allophones, e.g., /a ā/ → [ə ə̄]; these were reanalysed as final /e ē/ when the conditioning, the final /s/, was lost. Perhaps there was also a tendency towards glide prothesis (ibid. 30).

Meanwhile, VP1 had occurred, and the reciprocal fronting of back vowels after /j/. In short, both of the Common Slavic typological constraints were established, the metrical (rising sonority) and the tonality agreement (intrasyllable harmony; ibid. 34); both were manifested in productive phonological alternations.

Once the constraints on syllable constituency had become manifest, the next phase in the metrical drift was the simplification of complex syllable nuclei: The monophthongization of oral dipthongs and nasal diphthongs. The new front vowels conditioned the beginning of regressive sharping of velars (VP2ab), and high front vowels, oral and nasal, conditioned the beginning progressive sharping (VP2c).

Here we must turn to the speakers of this medieval dialect, for they were responsible for what happened next. Since this community was multicultural, we can assume that it counted both first-language (L1) Slavic-speakers and—probably for a long time—people with other primary languages, for whom Slavic was an L2.

At some point the palatalization reached a stage with regressive velar fronting across the board and the beginning of progressive fronting after high vowels.

This perfectly orderly allophone distribution would be unremarkable to the L1 speakers who produced it. But L2 speakers would experience it very differently. For them the progressive sharping was more salient than the regressive; it stood out because it occurred before back vowels (/a/ and /ā/), with a clear alternation depending on the height of the back vowel. It could easily be interpreted as distinctive. L2 speakers' regressive sharping was perhaps not very different from the typical adjustment of velars to following front vowels in their primary languages.

In this way their L2 usage skewed the overall community usage, in effect putting a brake on the development of VP2ab and accelerating the VP2c. Both L1 and L2 speakers advanced the progressive sharping, and soon the most salient of the velars, /k/ [kʲ], was reanalysed as a variant of the VP1 affricate, the origin of the North Russian *cokan'e* and *čokan'e* types.

The allophonic variation of the regressive palatalization, blurred by the usage of the L2 speakers, was reduced to free variation.

Thus the allophones of the regressive VP2ab came and went, leaving no evidence.

It may seem paradoxical that sharping would be lost in precisely the environments where it was most clearly motivated. But this hypothetical event has parallels in historically attested languages. In Bulgarian and Ukrainian the Common Slavic sharping was lost in consonants preceding a front vowel while it remained distinctive elsewhere (Jakobson [1929] 1962:72); cf. ORuss. /i/: *šestь* 'six', *šesti*.gen vs. Ukr. *šist´*, *šesty*; /e/: Ukr. *kinec´* [kʲinecʲ] 'end', *kincja*.gen.sg [kʲinʲtsʲa] vs. *kincem*.ins.sg [kʲintsem]. In these languages it may have been distinctive sharping that was lost; but the socio-linguistic conditions were undoubtedly similar.

6. Conclusion

Surely, the Second Velar Palatalization has been the most troublesome Slavic sound change on record. To begin with, it was thought to be two changes, VP2 and VP3. It took a long time for scholars to agree on the detailed conditioning of 'VP3'. And then there was the problem of relative chronology: Which one was the real number 2?

Vaillant (1950: 49) thought one could settle that issue: Since their outcomes are identical there is no phonoiogical reason to separate the regressive and progressive parts of this VP. Andersen (1969:563) showed that there is no dialect-geographical basis for separating them: The isogloss for the lenition of VP2abc [ǵ] is intermediate between those for VP1 [ǵ] and PPS dj. Their concentric isoglosses reflect the relative chronology. But that was when the controversies over the relative chronology really heated up. Nesset (2015: 238) offers a brief and sane summary of this. Vermeer's (2003) account exposes all the embarrassing details.

Gluskina's and Zaliznjak's discoveries led some scholars to believe that finally the chronology issue had been resolved: VP3, which had affected all Common Slavic dialects must have preceded VP2, which hadn't.

All the controversy could have been avoided if our predecessors had had better methods to work with. This paper has drawn attention to some aspects of sound change that are relevant in any interpretation of phonological change.

One. Every change begins with the creation of synchronic variation. Its eventual outcome—our evidence of it—holds clues to the phonological context and relative chronology of its original gradual progression. Here: VP2abc reflects the vowel system

at the time, the simplifications of oral and nasal diphthongs; the intersyllabic environment of VP2c signals the innovated trochaic foot-structure reflected in the strong and weak jers of Havlík's rule (Bethin 1998: 277).

Two: Every change is a token of a type. To interpret it you need to examine it in comparison with other changes of the same type. Here: There was no reason to believe VP2c occurred without VP2ab. The question was not Why did it not occur? It was What happened to the evidence?

Three. Every change is compatible with synchronic typological constraints. Here: There was no reason to think that the Synharmony constraint had been temporarily suspended between VP1 and VP2c.

Four. The inflectional morphology may offer relevant information. Here: The variant nom.sg *-e* implies a relative chronology.

Five. The social context of a change may be essential to its interpretation, as here. This reminds us that the historical linguist is also a historian. In that role our task is not to interpret isolated data, but to construct as coherent a narrative as possible out of the available evidence. It can happen that some essential detail is unattested but can be posited. In such cases the coherence of the narrative and our familiarity with similar events elsewhere may lend plausibility to a hypothetical account of what happened to the missing evidence.

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