

Revisiting the Relative Chronology of the First Compensatory Lengthening in Ancient Greek

A Two-Wave Model

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First Compensatory Lengthening (1st CL)

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 - perhaps also $*-VR\grave{i}-$ and $*-Vln-$ but we'll ignore those

Proto-Greek	Att.-Ion., NWGr., Dor. mitior	Dor. severior, Boeot., Arc.-Cypr., Pamph.
$*-esR-$	$-\epsilon\iota R-$	$-\eta R-$
$*-eRs-$	$/-\bar{e}R-/$	$/-\bar{\epsilon}R-/$
$*-osR-$	$-ouR-$	$-\omega R-$
$*-oRs-$	$/-\bar{o}R-/$	$/-\bar{\omicron}R-/$

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<i>*esmí</i> 'I am'	εἰμί /ḗmí/	ἦμί /ḗmí/
<i>*-stelsa-</i> 'sent'	ἔστειλα /é̄stḗla/	ἀποστήλανσας (Cret.) /apostḗlansas/
<i>*worsanós</i> 'heaven, sky'	οὐρανός /ṓranós/	ὠρανός (Dor., Boeot.) /ṓranós/

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1 First Compensatory Lengthening (1st CL)

- Accent Rule (Wackernagel 1888, Batisti 2017):

1st CL seems to have operated in unaccented syllables only

1st CL	no 1st CL
<i>*korsā̄</i> > κουρά /kōrā̄/ ‘haircut’	<i>*kórsā</i> > κόρση /kórsē/ ‘temple, side of the forehead; (pl.) hair’
<i>*orsā̄</i> > ούρα /ōrā̄/ ‘tail’	<i>*órsos</i> > *ὄρσος > Att. ὄρρος ‘rump, arse’ (cf. Ion. ὀρσοθύρη ‘backdoor’)

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1 First Compensatory Lengthening (1st CL)

- Phonetic mechanism
- $*-VsR-$ and $*-VRs-$
 - (1) lenition $*s > *h$
 - (2) metathesis $*-VRh- > *-VhR-$
- $*-VhR-$
- further development: two positions
 - (a) $*-VhR- > *-VRR-$ in all dialects, then simplification and CL in all dialects except Thess., Lesb. (Ruipérez 1972, Scarborough 2023)
 - (b) assimilation of $*h$ to $*V$, triggering CL ($*-VhR- > *-V̄R-$) or to $*R$, triggering gemination ($*-VhR- > *-VRR-$) (Kiparsky 1967, Adrados 1976)

Exceptions to 1st CL

2 Exceptions to 1st CL

- exceptions in Attic-Ionic with η /ē/ ε̃ ω /ō/ instead of εἰ /ē/ ε̃ ου /ō/
 - ὤμος /ōmos/ m. ‘shoulder’ (*Il.*+) < **h_xómsos*
 - Cf. Vedic *ámsa-*, Proto-Germanic **amsa-* (e.g., Gothic acc. pl. *amsans*), Armenian *ows*, Umbrian loc. sg. **uze** (*Ib* 27,28), *onse* (*VIb* 50); difficult: Latin *umerus*, Tocharian B *āntse*, A *es* ‘shoulder’ ([Höfler 2018](#))
 - Mycenaean *e-po-mi-jo* ‘shoulder-guard’ is hardly informative; ἐπ-ομμάδιος ‘on the shoulders’ (*Theoc.* 29.29) (pseudo-)Aeolic ([Batisti 2019](#))
 - κῶμος /kōmos/ m. ‘song of praise; revel’ (*h.Merc.*+) < **kómsos*
 - Cf. Vedic *śámsa-* m. ‘praise, invocation’, Old Avestan *sāṅgha-* m. ‘annunciation, judgment’, Young Avestan *saṅha-* m. ‘order’ ([Durante 1974](#), [Hackstein 2002](#): 190, [Meusel 2021](#), etc.); **kems-* “evaluate in speech” ([Fortson & Weiss 2019](#): 640, *LIV*²: 326)
 - ὠνος /ōnos/ m. ‘price’ (*Hom.*, *A.R.*, *Theocr.*) < **uónos*
 - denominal verb ὠνέομαι ‘buy’
 - Cf. Vedic *vasná-* n. ‘price’ (**ue/osnó-*), Latin acc. *uēnum* ‘(for) sale’, and Armenian *gin* ‘price’ (both **uesno-*); **ues-* ‘sell’ (*LIV*²: 693): Hittite *wāši* ‘sells’

2 Exceptions to 1st CL

- exceptions in Attic-Ionic with η /ē/ ε̃ ω /ō/ instead of ει /ē/ ε̃ ου /ō/
 - δῆνεα /dēnea/ n. ‘plans, counsels, wiles’ (ep., *Il.*+) < **dēnsesh*₂
 - Cf. Vedic *dāmsas-* n. ‘clever deed, wonder, skill’, Young Avestan *danhah-* n. ‘dexterity’ (Dunkel 1995: 2–6, Stüber 2002: 78–79)
 - **dens-* ‘(be/become/make) knowledgeable, skilled’ (LIV²: 118–119); **dḥs-* in διδάσκω ‘teach’, δέδαε ‘taught’, ἐδάη ‘learned’, δαΐφρων ‘wise of mind’
 - ἦνις /ēnis/, ἦνις /ēnīs/ ‘a year old, yearling’ (Hom.) < **h*₁*énsis*
 - Cf. ἔνος /énos/ ‘year’ (Hsch., *Sch.* Theoc. 7.147), ἐνι-αυτός m. /eni-autós/ ‘anniversary, year’ (*Il.*+), τετρά-ενες n. ‘four years old’ (Theoc. 7.147)
 - Proposal: **h*₁*én-es-* n. ‘year’ → **h*₁*en-s-ó-* → **h*₁*énsis* ‘yearling’ parallel to **u*_̥*ét-es-* n. ‘year’ (Gk. ἔτος) → **u*_̥*et-s-ó-* > Vedic *vatsá-* m. ‘calf, yearling’

2 Exceptions to 1st CL

- Discarded examples:
- ζωμός /zōmós/ ‘soup, sauce, broth’
 - two possible etymologies:
 - **ios-mó-* (cf. **ies-* ‘boil, foam’ of ζέει ‘boils; ferments’; **Darms 1978**: 325; **Seldeslachts 1991**: 255) with 2nd wave CL (but note the accent!)
 - **iuh₃smó-* (cf. ζύμη ‘leaven’ < **iúh₃smeh₂₋*) via **i(u)ōmós* with laryngeal breaking (unaccented **uh_{2/3}* & **ih_{2/3}* > **uā/ō* and **iā/ō*), **Olsen 2009**
- Διώνυσος ‘Dionysus’ (epic variant of Διόνυσος)
 - **diuós suh_xnus* ‘son of the sky’ >> “**diuos nūso-*” (**Dunkel 1995**: 13)
 - but etymology not evident (**Ringe 1984a**, **Peters 1989**, **Janda 2022**)
- γέγωνε ‘shouts’
 - **Hackstein 2002**: 187: **gh₃en-(h₁)se/o-* (cf. TA *ken-* ‘call’ < **gh₃en-*)
 - better: lengthened grade as in ἄνωγε ‘commands’ (**Vine 2007**)

2 Exceptions to 1st CL

- valid exceptions have two things in common:
 - (1) the sonorant involved is a **nasal** (either **m* or **n*)
 - (2) 1st CL happened in **accented** syllable (contrary to Wackernagel's claim that 1st CL only operated in unaccented syllables)
- **ὤμος** /ōmos/ m. 'shoulder' (*Il.*+) < **h_xómsos*
- **κῶμος** /kōmos/ m. 'song of praise; revel' (*h.Merc.*+) < **kómsos*
- **ὠνος** /ōnos/ m. 'price' (Hom., A.R., Theocr.) < **uósnos*
- **δήνεα** /dēnea/ n. 'plans, counsels, wiles' (ep., *Il.*+) < **dénsh₂*
- **ἦνις** /ēnis/, ἦνις /ēnīs/ 'a year old, yearling' (Hom.) < **h₁énsis*

Previous Explanations

3 Previous Explanations

- Lengthened grades
 - ὤμος ‘shoulder’ & κῶμος ‘song of praise’ as *vrddhi* derivatives (Schulze 1936, Thieme 1985)
 - but no semantic justification (cf. Darms 1978: 325)
- Analogy
 - Ringe 1984a: ὠνέομαι ‘buy’ for †οὐνέομαι due to analogy with antonym πωλέω ‘sell’, then *οὔνος & *οὔνή become ὤνος & ὠνή
- Different root vocalism
 - δήνεα ‘plans, counsels, wiles’ as **dánsesa* (Brugmann 1906: 518)
- Dialectal borrowings
 - Dunkel 1995 argues for Mycenaean origin of most of the exceptions
 - but no independent justification for such a scenario (‘shoulder!’)
 - it is unclear what the Mycenaean outcome of 1st CL clusters was

3 Previous Explanations

- Some scholars have argued that $*-oNs-$ & $*-osN-$ > $-\omega\nu/\mu-$ is the regular outcome even in Attic-Ionic
 - Kretschmer 1909, Kretschmer 1921, Boisacq 1916, Hermann 1923, Buck 1955, Frisk 1960–1972, Slings 1975, Seldeslachts 1991, Hackstein 2002, Darms 1978, Kostopoulos 2025
 - only in accented syllables: Peters 1984
- This conditioning factor does indeed account for:
 - κρουνός ‘source, stream’ (*Il.*+) < $*krosnó-$
 - Cf. OE *hræn*, *hærn* n. < PGmc. $*hrazna-$ < $*krosnó-$ (cf. also κρήνη ‘source, fountain’ < $*krahnā$ < $*kṛsnā-$)
 - Chalcidicean Ionic οὐνή ‘purchase-price’ < $*uosnéh_2-$
 - ὠνή (*Hdt.*+) analogically copied the vocalism of ὤνος, ὠνέομαι
 - adjectival suffix $-εινός$ < $*-es-nó-$ (e.g. ἀλγεινός ‘painful’ < $*alges-nó-$)
 - εἰμί / $\bar{e}mí$ / ‘I am’ < $*es-m(i)$

Proposal

Two waves of 1st CL

4 Two Waves of 1st CL

- Our proposal ([Batisti & Höfler fthc.](#))

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)	κουρά χειρός	ῶμος ῶνος	κρουνός οὐνή				

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1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
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1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
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1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
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Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ǫr-	-ōr-'	-ōr-'	-ǫn-	-ǫn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)	κουρά	χωρός	ώμος	κρουός	ώνος	ούνη	

4 Two Waves of 1st CL

Corollary I: *s was preserved *-VN_s- until after first wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ós ^r -	-ors-'	-os ^r -'	-óns-	-ón ^s n-	-ons-'	-os ⁿ n-'
1st s > h	-órs-	-ós ^r -	-orh-'	-oh ^r -'	-óns-	-ón ^s n-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ós ^r -	-ō ^r -'	-ō ^r -'	-óns-	-ón ^s n-	-ō ⁿ -'	-ō ⁿ -'
2nd s > h	-órs-	-óhr-	-ō ^r -'	-ō ^r -'	-ónh-	-ón ^h n-	-ō ⁿ -'	-ō ⁿ -'
2nd 1st CL	-órs-	-ō ^r -	-ō ^r -'	-ō ^r -'	-ō ⁿ -	-ō ⁿ -	-ō ⁿ -'	-ō ⁿ -'
e.g.	κόρση (μήλη?)		κουρά χειρός		ώμος ώνος		κρουνός οὐνή	

4 Two Waves of 1st CL

Corollary II: $*-\acute{V}sL-$ participated in second wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	<i>-órs-</i>	<i>-ósr-</i>	<i>-ors-'</i>	<i>-osr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-ons-'</i>	<i>-osn-'</i>
1st s > h	<i>-órs-</i>	<i>-ósr-</i>	<i>-orh-'</i>	<i>-ohr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-onh-'</i>	<i>-ohn-'</i>
1st 1st CL	<i>-órs-</i>	<i>-ósr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
2nd s > h	<i>-órs-</i>	<i>-óhr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-ónh-</i>	<i>-óhn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
2nd 1st CL	<i>-órs-</i>	<i>-ōr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-ōn-</i>	<i>-ōn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
e.g.	κόρση	(μήλη?)	κουρά	χειρός	ῶμος	ῶνος	κρουνός	οὐνή

Counterexamples?

5 Counterexamples and problematic cases

- Verbs are difficult as there is an ongoing discussion as to where the accent was (if there was one at all) at the crucial period in time
 - A certain stem allomorph can easily spread by analogy
 - With these caveats in mind, the following may or may not be problematic:
 - inf. pres. εἶναι ‘to be’ < **es-nai*
 - Ion. εἴνυμι, εἰνύω ‘clothe’ < **ues-nu-*
 - Att.-Ion. perf. m.-pass. εἶμαι ‘I am dressed’ < **ues-mai*
 - εἶμα (Lesb. ἔμμα, Cret. φῆμα) ‘garment’ < **ues-mḥ*
 - the sigmatic aorists of verbs in *-eN-*:
 - ἔνειμα < **e-nem-sa* (νέμω ‘distribute’), ἔμεινα < **e-men-sa* (μένω ‘stand, remain’), ἔτεινα < **e-ten-sa* (τείνω ‘stretch’), etc.
 - generalization of unaccented root allomorph (in augmented forms)?
- no problematic counterexamples

Corollary I:
Preservation of s in *VNs -?

6 Preservation of *s in *-VN̄s-?

Corollary I: *s was preserved *-VN̄s- until after first wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση		κουρά		ῶμος		κρουνός	
	(μήλη?)		χειρός		ῶνος		οὐνή	

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	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)	κουρά χειρός	ῶμος ῶνος	κρουνός οὐνή				

6 Preservation of *s in *-VNs-?

- Since we know that *s in sequences of accented vowel + liquid + *s (i.e., *-V \acute{L} s-) was preserved well into alphabetical Greek ...
 - e.g., *kórsā > κόρση /kórsē/ ‘temple, side of the forehead; (pl.) hair’
 - *órsos > *ὄρσος /órsos/ (Ion. ὀρσοθύρη ‘backdoor’) > Att. ὄρρος /órros/ ‘rump, arse’)
- ... it seems legitimate to hypothesize that it was also preserved – for some time at least – in sequences of accented vowel + *nasal* + *s (i.e., *-V \acute{N} s-)
- ... and was only later lenited in a second wave of *s > *h, triggering 2nd wave of 1st CL
 - independent evidence for this scenario?

6 Preservation of *s in *-ṼNs-?

- Independent evidence: **δασύς** vs. **δauλός**
- **δασύς** /dasús/ ‘hairy, shaggy; thick with leaves’ (*Od.*+)
 - **dens-* ‘dense’.
 - Cf. Latin *dēnsus* ‘dense, compact’ (**dṅso-* or **denso-*), Hittite *daššu-* ‘strong, powerful; heavy, well-fed; difficult, important’ (**densu-* or **donsu-*)
 - obvious problem is preservation of *-s- in **δασύς** < ***dṅsús**
- **dṅsu-* demonstrably underwent the expected development to ***dahu-** in **δauλός** /daulós/ ‘thick, shaggy’ (*A. Supp.* 93, *Fr.* 27, *Nonn.*, *Paus. Gr.*, *H.*) < ***dahulós** < **dṅsulós*
- Why was *s preserved in **dṅsús** > **δασύς** but not in ***dṅsulós** > **δauλός**?

6 Preservation of *s in *-VNs-?

- Two ways of explaining δασύς vs. δαυλός, both operate with analogical restoration of *-s- and the assumption that
 - *-VsV- > *-VhV- happened before *-VNs- > *-VNh-
- (1) Seldeslachts 1998, Nikolaev 2007, 2010, Neri 2013, van Beek 2022
 - u-adjective preserved root ablaut and mobile accent until recently
 - i. *dén-s-u- : *d̥n̥s-éu-
 - ii. *dén-s-u- : *dah-éu- (*-VsV- > *-VhV-)
 - iii. *dén-s-u- : *dah-éu- >> *das-éu- (analogical restoration)
 - iv. *das-ú- : *das-éu- (paradigmatic leveling)
 - v. δασύς : δασέος
 - no root ablaut in thematic derivative *d̥n̥sulós, therefore > *dahulós > δαυλός
- But root ablaut & mobile accent may have already disappeared in late PIE.
 - cf. *gʷr̥h₂-ú-, *gʷr̥h₂-éu- ‘heavy’ > Greek βαρύς, gen. βαρέος, Vedic guríh, gen. guróh

6 Preservation of *s in *-VNs-?

- Two ways of explaining *δασύς* vs. *δανλός*, both operate with analogical restoration of *-s- and the assumption that
 - *-VsV- > *-VhV- happened before *-VNs- > *-VNh-
- (2) Alternative offered by *θρασύς* ‘brave, bold’ from **d^hrs-ú-*
 - **d^hrsú-* > **t^hrahú-* >> **t^hrasú-* > *θρασύς*
 - restoration of *-s- due to analogy with *θάρσος* n. ‘courage’ (*Il.*+) < **θέρσος* with regularly preserved *-s- (cf. [Lejeune 1972](#), [de Lamberterie 1990](#))
- perhaps
 - **d^hrsú-* > **dahú-* >> **dasú-* > *δασύς* ‘hairy, shaggy; thick with leaves’
 - restoration of *-s- due to analogy with **dónsu-* (or **dénsu-*) ‘vegetative density; thicket’ (cf. Old Irish *dus* ‘bushy tree’, [Höfler 2019](#))
- Relative chronology **-VsV- > *-VhV-* before **-VNs- > *-VNh-* is also required by our model of two waves of 1st CL

Corollary II:
Second wave 1st CL with $^* - \hat{V}_s L - ?$

7 Second wave 1st CL with $*-\acute{V}sL-$?

Corollary II: $*-\acute{V}sL-$ participated in second wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	<i>-órs-</i>	<i>-ósr-</i>	<i>-ors-'</i>	<i>-osr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-ons-'</i>	<i>-osn-'</i>
1st s > h	<i>-órs-</i>	<i>-ósr-</i>	<i>-orh-'</i>	<i>-ohr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-onh-'</i>	<i>-ohn-'</i>
1st 1st CL	<i>-órs-</i>	<i>-ósr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-óns-</i>	<i>-ósn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
2nd s > h	<i>-órs-</i>	<i>-óhr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-ónh-</i>	<i>-óhn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
2nd 1st CL	<i>-órs-</i>	<i>-ōr-</i>	<i>-ōr-'</i>	<i>-ōr-'</i>	<i>-ōn-</i>	<i>-ōn-</i>	<i>-ōn-'</i>	<i>-ōn-'</i>
e.g.	κόρση	(μήλη?)	κουρά	χειρός	ῶμος	ῶνος	κρουνός	οὐνή

7 Second wave 1st CL with $*-\check{V}sL-$?

Corollary II: $*-\check{V}sL-$ participated in second wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση	(μήλη?)	κουρά	χειρός	ῶμος	ῶνος	κρουνός	οὐνή

7 Second wave 1st CL with *- $\acute{V}sL$ -?

- Our Assumption:
 - Retention of *s in *- $\acute{V}Ls$ - (κόρση, *ὄρσος) → *s preserved longer in *- $\acute{V}Ns$ -
- Key witness:
 - * $\mu\acute{o}sn\bar{a}$ > οὐνή vs. * $\mu\acute{o}snos$ > ὄνος has - $\acute{V}sN$ - not *- $\acute{V}Ns$ -
- Implication:
 - Expect similar behavior in *- $\acute{V}sL$ - sequences?
- **2nd wave** 1st CL with outcomes parallel to *- $\acute{V}sN$ - (η, ω)
- Challenge to standard view:
 - Traditional model: 1st CL with **standard** outcomes (ει, ου)

7 Second wave 1st CL with $*-\acute{V}sL-$?

- examples of $*-\acute{V}sL-$ with $V = *e$ and apparent **1st wave** vocalism (ει) are not probative
 - nom. sg. χεῖρ generalized from oblique χειρ- ' < $*\acute{g}^hes-r-$
 - perf. εἴληφα 'have seized' < $*se-sl-$ is a late formation (Ringe 1984b)
 - Ionic χεῖλιοι 'a thousand' from $*\acute{g}^heslijo-$ (cf. Att. χίλιοι with unexplained *i*-vocalism, Aeol. χέλλιοι, Lac. χήλιοι), may show recent accent retraction from an oxytone $*\acute{g}^heslijo-$
 - Cf. the pair μῦριος 'countless' (< $*\mu\acute{y}ri\acute{o}s$) : μῦριοι 'ten thousand'
 - one example of $*-\acute{V}sL-$ with $V = *e$ and apparent **2nd wave** vocalism (η)
 - μῆλη 'surgical probe' (Hp., AP) from $*mes-$ 'touch, feel' as $*m\acute{e}sl\bar{a}$
 - or: $*masl\bar{a}$ with $*mas-$ from (ἐπι-)μαίομαι 'to touch, feel, grasp, examine' (thus Prellwitz apud Frisk 1960–1972 II: 225)
- no counterevidence against 2nd wave for all $*-\acute{V}sR-$ ($*-\acute{V}sL-$ and $*-\acute{V}sN-$)

Conclusion

8 Conclusion

(1) 1st wave 1st CL in all unaccented sequences of *-VRs- and *-VsR-

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)	κουρά χειρός	ῶμος ῶνος	κρουνός οὐνή				

8 Conclusion

(1) 1st wave 1st CL in all unaccented sequences of *-VRs- and *-VsR-

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ōr-	-ōr-'	-ōr-'	-ōn-	-ōn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)	κουρά	χωρός	ώμος ώνος	κρουνός ουνή			




8 Conclusion

(2) *s in accented *- $\acute{V}Rs$ - and *- $\acute{V}sR$ - survived 1st wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- ors -'	- osr -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- ons -'	- osn -'
1st s > h	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- orh -'	- ohr -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- onh -'	- ohn -'
1st 1st CL	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
2nd s > h	- $\acute{o}rs$ -	- $\acute{o}hr$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}nh$ -	- $\acute{o}hn$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
2nd 1st CL	- $\acute{o}rs$ -	- $\acute{o}r$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}n$ -	- $\acute{o}n$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
e.g.	κόρση (μήλη?)		κουρά χειρός		ῶμος ῶνος		κρουνός οὐνή	

8 Conclusion

(2) *s in accented *- $\acute{V}Rs$ - and *- $\acute{V}sR$ - survived 1st wave 1st CL

	LIQUIDS				NASALS			
	 ACC		UNACC		 ACC		UNACC	
Input	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- ors -'	- osr -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- ons -'	- osn -'
1st s > h	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- orh -'	- ohr -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- onh -'	- ohn -'
1st 1st CL	- $\acute{o}rs$ -	- $\acute{o}sr$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}ns$ -	- $\acute{o}sn$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
2nd s > h	- $\acute{o}rs$ -	- $\acute{o}hr$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}nh$ -	- $\acute{o}hn$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
2nd 1st CL	- $\acute{o}rs$ -	- $\acute{o}\grave{r}$ -	- $\bar{o}r$ -'	- $\bar{o}r$ -'	- $\acute{o}\grave{n}$ -	- $\acute{o}\grave{n}$ -	- $\bar{o}n$ -'	- $\bar{o}n$ -'
e.g.	 $\acute{\kappa}\acute{o}\rho\sigma\eta$		κουρά		$\acute{\omega}\mu\omicron\varsigma$		κρουνός	
		(μήλη?)		χειρός		$\acute{\omega}\nu\omicron\varsigma$		οὐνή





8 Conclusion

(3) *s in *- \acute{V} sR- and *- \acute{V} Ns- (but not *- \acute{V} Ls-) > *h, then 2nd wave 1st CL

	LIQUIDS				NASALS			
	ACC		UNACC		ACC		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
2nd 1st CL	-órs-	-ǫr-	-ōr-'	-ōr-'	-ǫn-	-ǫn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)		κουρά χειρός		ῶμος ῶνος		κρουνός οὐνή	





8 Conclusion

(3) *s in *- \acute{V} sR- and *- \acute{V} Ns- (but not *- \acute{V} Ls-) > *h, then 2nd wave 1st CL

	LIQUIDS				NASALS			
	ACC 		UNACC		ACC 		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
 2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
 2nd 1st CL	-órs-	-ǫr-	-ōr-'	-ōr-'	-ǫn-	-ǫn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)		κουρά χειρός		ῶμος ῶνος		κρουνός οὐνή	

8 Conclusion

(3) *s in *- \acute{V} sR- and *- \acute{V} Ns- (but not *- \acute{V} Ls-) > *h, then 2nd wave 1st CL

	LIQUIDS				NASALS			
	ACC 		UNACC		ACC 		UNACC	
Input	-órs-	-ósr-	-ors-'	-osr-'	-óns-	-ósn-	-ons-'	-osn-'
1st s > h	-órs-	-ósr-	-orh-'	-ohr-'	-óns-	-ósn-	-onh-'	-ohn-'
1st 1st CL	-órs-	-ósr-	-ōr-'	-ōr-'	-óns-	-ósn-	-ōn-'	-ōn-'
 2nd s > h	-órs-	-óhr-	-ōr-'	-ōr-'	-ónh-	-óhn-	-ōn-'	-ōn-'
 2nd 1st CL	-órs-	-ǫr-	-ōr-'	-ōr-'	-ǫn-	-ǫn-	-ōn-'	-ōn-'
e.g.	κόρση (μήλη?)		κουρά χειρός		ῥῶμος ῥῶνος		κρουνός οὐνή	

Děkujeme!

Εὐχαριστούμεν!

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