

# Dissymmetry in phonological development

- an example from Armenian

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# Development of \* $d^h_j$

- \* $d^h_j$  >  $j$
- \* $med^h_jio-$  >  $měj$  'middle': Ved. *mádhyā-* etc.
- \* $g^heid^h(u)_jio-$  >  $gěj$  'moist': Russ. *židkij* etc.
- \* $sah(j)d^h(u)_jio-$  >  $aěj$  'right' : Ved. *sādhú-* 'leading to the goal', Gk. *ίθύς* 'direct'

# Development of \**dj*

\**dj* > č

Pedersen 1906: 396-97; Greppin 1993; Kortlandt 1994; Martirosyan 2010: 718-19, Kocharov 2017: 32ff.

*oročem/oročam* 'chew, ruminatē' : Lat. *rōdere* 'gnaw', *rādere* 'scratch'?

BUT the root vocalism does not match

## Development of \**dj*

\**dj* > *c*

Godel 1970: 147, 1975: 82; Klingenschmitt 1982: 194ff, Olsen 1987: 75, 1999: 811.

- *ałceal* 'salted', *ałcem* 'defile' < \**sáldje-* or \**słdje-* = Gm. *sülzen* 'put into brine', OHG *sulza* (f) 'brine', Dutch *zilt, zult* 'salty' < \**sultja-*
- *mic* '(fetid) mud' < \**smidjo-* : OE *smitte*, OHG *smiz* 'spot' < \**smidjah<sub>2</sub>-* ; vb. OE *smītan* 'smear, pollute', OHG *bismīzan* 'smear, sully', Goth. *bismeitan, gasmeitan* 'smear'

## Development of \**dj*

- *hecanim* 'mount' < \**sed<sub>1</sub>je-*: PGm. \**setja-* > ON *sitja* 'sit' etc., probably Gk. *ἕζομαι* 'be seated'. Pattern stative \*-*h<sub>1</sub>je-* vs. \*-*eh<sub>1</sub>-* > Lat. *sedēre*, cf. e.g. Gk. *μαίνομαι/ἐμάνην*, *φαίνομαι/ἐφάνην*; no external support for *s*-aorist. Kocharov (2019: 191) "preference for \**sed-s-* is determined by phonetic reasons alone".
- *kcanem* 'sting, bite' < \**gid<sub>1</sub>je-*; root \**gejd-* as in ON *kitla* 'tickle' etc. Zero-grade consistent with yod-present
- *mowcanem* 'bring into, take in'; serves as causative to *mtanem*, aor. *emowt* enter < \*(*s*)*mōud<sub>1</sub>je-* ?, type Lat. *sōpīre*

## Development of \**dj*

- *bowcanem* 'feed', *aor. ebowt.* unclear
- *xacanem* 'bite' < \**k<sup>h</sup>ǵdie-*: Ved. *khǵdati* 'chews'; no external evidence for *s*-aorist
- *anicanem* 'curse' < \**h<sub>3</sub>nōǵdie-* (Klingenschmitt 1982: 194-95): Got. *ganaitjan* 'mock' or from *s*-aorist?

## Development of \**dj*

- Kortlandt 1994: 28: "nasal presents are never derived from *ye*-presents, so these reconstructions must be wrong"
- But that depends on the interpretation – nasal presents *are* derived from *s*~~*e*~~-presents (*harc<sup>c</sup>anem*)

# Development of \* $d_{\bar{i}}$

\* $d_{\bar{i}}$  > c or č (no conditioning)

Džaukyan 1982: 61-62; 2027; Macak 1055-56.



## Development of \**tj*

- \**tj* > *čc*:
- *kočc*em 'call, invite' (Solta 1960: 381-82) : Goth. *qīpan* beside ON *kveđja*, OS *queddjan* 'greet' – BUT
- possible influence from *gočc*em 'cry' < denom. \**uok<sup>w</sup>je-* (Meillet 1905-06: 244) or caus./it. \**uok<sup>w</sup>éje-* : Skt. caus. *vacāyati*. Cf. also onomatopoeic verbs/nouns in *-čc*em, *-čciwn*, e.g. *ščc*em/*-iwn* 'hissing', *mřnc*em, *-čciwn* 'roaring'

# Development of \* $\underline{tj}$

- \* $\underline{tj} > c^c$ :
- $xowc^c$  (i) 'room, cell' : OHG *hutta* 'cottage' < \* $k^h\underline{utj}ah_2$ - (Olsen 1987: 76)

## Development of \**tj*

- \**tj* > *c̣*:
- *anc̣anem*, aor. *anc̣i* 'pass, cross' < \**h<sub>2</sub>antjē-*: Gk. *ἀντιᾶομαι* 'come towards' (Olsen 1987: 76) rather than \**h<sub>2</sub>antse-* (Pedersen 1906: 425)
- *erkic̣s* 'twice, for the second time', *eric̣s* 'three times, for the third time' < \**duītjō-*, *tritjō-* (Olsen 1987: 77): Lat. *tertius*, Lith. *trẽčias* 'third' etc. rather than : OS *twisk*, OHG *zwisk(i)* 'double' (only West Germanic)
- Suffix *-akic̣* 'fellow', e.g. *arškertakic̣* 'fellow disciple', vb. *ḳc̣anem* 'join, unite', redupl. *ḳc̣ḳc̣em* 'conjoin' < \**dui-duītjē-* > \**erkirkic̣e-* 'two-double'
- *ḳc̣ec̣* 'isolated private' < \**suetjō-* = Lith. *svẽčias* 'stranger, guest'

## Development of \**tj*

- Suffix *-ec<sup>ç</sup>ik*
- Verbal adjectives with gerundial meaning, e.g. *diec<sup>ç</sup>ik* 'sucking (baby)', *erģec<sup>ç</sup>ik* 'singer', *ģełec<sup>ç</sup>ik* 'beautiful', i.e. 'to be looked at, worth looking at' < \**ueletjo-*, cf. W *gweled* (verbal noun)
- *ç*, preposition 'towards, to, until' < \**potj*: Gk. dial. *ποτι*, Av. *paiti*, OP *patiy* (Olsen 1987: 78)

## Development of \**tj*

Av. (V.18.29): *nōit dim yauua bitīm vācim **paiti pərəsəmnō** buua* 'I will not address a second question to him'

Arm. ***harc<sup>c</sup>anem c<sup>c</sup>na*** 'I ask him'

Boeot. ***ποτι-δεδόμενος*** 'given to (sby.)'

Arm. ***tam c<sup>c</sup>*** - 'I give to (sby.)'

OP ***xšapa** vā rauca **pati** vā* 'by night or by day'

Arm. ***c<sup>c</sup>ayg*** 'night', lit. 'till morning'

## Development of \**tj*

The subjunctive (Olsen 1987)

Starting point: 3.sg. \**b<sup>h</sup>er-ē-tj-* →

1.sg.	* <i>b<sup>h</sup>er-ē-tj-ō</i>	>	<i>beric<sup>c</sup></i>
2.sg.	* <i>b<sup>h</sup>er-ē-tj-essi</i>	>	<i>berc<sup>c</sup>-es</i>
3.sg.	* <i>b<sup>h</sup>er-ē-tj-eti</i>	>	<i>berc<sup>c</sup>-ē</i>
1.pl.	* <i>b<sup>h</sup>er-ē-tj-omes</i>	>	<i>berc<sup>c</sup>-owk<sup>c</sup></i>
3.pl.	* <i>b<sup>h</sup>er-ē-tj-enti</i>	>	<i>berc<sup>c</sup>-en</i>

Cf. for the structure Skt. precative *bhūyās* → *bhūyāsam*; Pol. pres. *jest* → *jestem*; Farsi pres. *hast* → *hastam*

# Development of \* $t_j$

\* $t_j$  >  $c^c$  or  $\check{c}^c$  (no conditioning)

Džaukyan 1982: 61-62; 2027; Macak 1055-56.

# Balance

- $*d^h_j > j$
- Pro: entire material (3 good examples)
- $*d_j > č$
- Pro: phonetic symmetry
- Con: no convincing examples
- $*t_j > č^c$
- Pro: phonetic symmetry
- Con: only *koč<sup>č</sup>em* potential example



# Balance

- $*d_{\underline{i}} > c$
- Pros: several good examples with external parallels, including *atceal*, *mic*, *hecanim*, *kcanem*
- Con: missing symmetry
  
- $*t_{\underline{j}} > c^c$
- Pros: several good examples with external parallels, including *kc<sup>c</sup>ec<sup>c</sup>*, *c<sup>c</sup>*, *eric<sup>c</sup>s*
- Con: missing symmetry

# On dissymmetry in phonological development

- Kortlandt, 1987: 51:

(development of  $*t_{\underline{j}} > c^c$ ,  $*d_{\underline{j}} > c$ ) "highly improbable in view of *mēj̃, goč<sup>c</sup>em*"

BUT: is symmetry really what we want and what we expect?

Arm. notorious for its idiosyncratic rules, e.g. metathesis of MA/M + r, but not T + r

After Arm. soundshift:  $*d^h$  voiced,  $*d + t$  voiceless

- Voiced stops prone to lenition, perhaps  $*d^h_{\underline{j}} > *_{\underline{j}}_{\underline{j}}$

## A Romance parallel

- Cf. Hall (1976: 195-97), Meier-Lübke (1974: 456-61), Bourciez 1967<sup>5</sup>: 162-63)

Posttonic *gy, dy, y* > Proto-Romance *y*, preserved in Sicilian,

Cf. e.g. *radium* > *raiu*, *hodie* > *oi*, *podium* > *poiu*, *sagittam* > *sayitta*

➤ *dz/z* in Rum., Rhaet, Venet., e.g. Rum. *rază*

➤ > Ital. *gg*, e.g. *raggio*, *oggi*, *poggio*

Cf. also Gothic and Nordic Verschärfung: *ddj/ggw* vs. West Germanic *jj/ww*

# A Romance parallel

- \**t̪i* > Proto-Romance \**tʰtʰ*
- Preserved in Italian, e.g. *pretium* > *prezzo*, *platiam* > *piazza*
- > Engadin *ts*, e.g. *platsa*
- > Provençal, French *s*, e.g. *place*
- > Spanish *p*, e.g. *plaza*

## Suggestion for the Armenian output

- $*d^h_j > *j_j > j$  (lenition and "Verschärfung")
  - $*d_j > *t_j > c$
  - $*t_j > *t^h_j > c^c$
- 
- Pros:
  - Fits the material
  - Consistent with general Armenian principles of sound change

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