

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbals
nouns

References

In defense of Narten roots

Götz Keydana

Opava
November 12, 2014

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbals
nouns

References

- 1 Narten presents
- 2 Deconstructing Narten presents
- 3 Narten roots
- 4 Narten roots in Vedic
- 5 Narten roots and deverbals nouns

Narten 1968

Narten roots

Götz
Keydana

Narten presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

Narten (1968) reconstructs an IndoIranian proterodynamic (i.e. acrostatic) root present

ind.act.

stāumi *stáumasi*

ind.med.

stáui *stáumadh^hai*

- Narten did not reconstruct a PIE paradigm (but claimed that the media are “ererbt” (Narten 1968: 13).
- She finds traces of the pattern in the Greek medium like εἶμαι (cf. Ved. *váste*) or hom. εὔκτο besides myc. *e-u-ke-to* (cf. Ved. 3.pl. *óhate*).

Possible extensions

Narten roots

Götz
Keydana

Narten presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Already Narten argued that the original pattern developed into a thematic present in Vedic, cf. *dāṣṭi* besides *dāśati*, *rāṣṭi* besides *rājati*, *d^hāvasi*, *krāmati* (AV+) etc.
- The LIV lists 32 roots with Narten presents (+ 18 dubious cases).
- The Balto-Slavic evidence is dubitable, see Matasović (1997), Villanueva Svensson (2013).
- Hittite, too, has no clear evidence, see Melchert (2013).

Upgrading: Strunk 1985, 1987

Narten roots

Götz
Keydana

Narten presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Immobile accent “causal only for the primary full grade forms” (Strunk 1987: 388).
- “Ihr immobilier Akzent und ihr flexivischer Wechsel zwischen Dehn- und Vollstufe des Stammes passen morphologisch nicht zueinander.” (Strunk 1985: 497)
- The lengthened grade thus superseded original full grades.
 - But: The immobile accent is not accounted for.
- ‘Sekundäraufstufung’ based on the template of the mobile athematic present.
 - But: forme de fondation is an abstract pattern. Do higher-order analogies exist?

Aktionsart: Kümmel 1998

Narten roots

Götz
Keydana

Narten presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Kümmel (1998: 191) assumes “‘Infigierung’ eines *é in die Wurzel” and compares this with *Vṛddhi*, from which it differs since “das infigierte *e immer betont ist”.
- The infix allegedly marks durative Aktionsart (Kümmel 1998: 205).
- But
 - infixation of a vowel is highly unlikely,
 - verbs denoting an activity like *STAV* or *TAKṢ* hardly need marking for durativity.
- (For a similar approach – *vṛddhi* of a root aorist – see Harðarson (1993: 61), Lipp (2009: 219).)

Reduplication: Kortlandt 2004

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

Kortlandt (2004), quoting Lubotsky, assumes that the starting point for Narten presents is the reduplicated present (cf. Sandell (2014)):

- *takṣ* < **tetk-* is a root with generalized reduplication (originally **teḱ-*)
- initial paradigm: **ti-téḱ-ti* (with pretonic **i* for **e* (Kortlandt 1987; 2004)), **téḱ-ṅti*,
- turned later into a static reduplicated present, probably **té-tḱ-ti*, **té-tḱ-ṅti*,
- leading, “with lengthening of the vowel replacing the lost consonants” (Kortlandt 2004: 9) to ved. *tāṣṭi*, *tākṣati*.
- The static reduplicated present spread into other roots.

Critique of the reduplication theory (1)

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- There is no evidence for PIE **-tĕk-* in this root in the first place (cf. Schumacher (2005: 605))!
 - Rather, Greek τέκτων like *taks* points to PIE **teḱp-* (Schindler 1994) (or even **teḱs-*, but see Lipp (2009: 221, fn.17)) – the connection to τίκτω, **teḱ-* remains dubious.
 - Metathesis typically requires that the target already exists; besides, it is typically irregular (Blevins and Garrett 2004).
- The development of the static reduplicated present is not accounted for:

“[It] may have been provoked by the raising of pretonic *-e-* to *-i-* in the reduplication syllable” (Kortlandt 2004: 10) is clearly insufficient.

Critique of the reduplication theory (2)

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- In Indo-Iranian, word-internal clusters are preserved, cf. perfect stems like ved. *papt-* (: *pat-*), av. *tatk-* (: *tac-*) (CL in Vedic with raising of the vowel a recent inner-Vedic development)
- Simplification of the coda cluster in Ved. *tāṣṭi* is a Vedic development
 - not leading to CL, cf. ppp. *taṣṭá-*.
- The spreading is unaccounted for.
- The stacking of hypotheses reduces the probability of the scenario significantly.
- “Everything about this rule [. . .] is problematic” (Jasanoff (2012: 128) on the *bigetun*-rule).

Validity of the data

Narten roots

Götz
Keydana

de Vaan (2004): No “trustworthy evidence” for Narten presents in Avestan.

Narten presents

Deconstructing Narten presents

Narten roots

Narten roots in Vedic

Narten roots and deverbal nouns

References

... it goes without saying that, if there is no Narten's present, the long-grades attested by Avestan manuscripts are mistakes that are best disposed of philologically. But, if such forms are expected, as the comparision [sic!] with Vedic points to, it can be no coincidence that stāumī is attested by some manuscripts, nāismī by all, etc. Facts do not speak by themselves: their interpretation is dictated by prejudice or comparative evidence. (Tremblay 2005: 21)

An alternative approach: Narten roots

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbial
nouns

References

Schindler (1994), Jasanoff (2012)

- Systematic relations between verbal Narten formations and noun formations with similar ablaut patterns.
- → 2 types of roots, standard roots and Narten roots.
 - Narten behaviour is a lexical feature.
 - But what kind of feature? Schindler seems to have ablaut in mind.

The evidence for Narten ablaut in nouns is not compelling:

“Für das Material bestehen natürlich z.T. Alternativerklärungen.” (Schindler 1994: 398)

Some observations and conclusions

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- The Narten pattern is defined by two features:
 - lengthened grade vs. full grade
 - static root accent
- Ablaut cannot determine accent, since PIE accent was morphological. (Kiparsky 2010, Keydana 2013).
- Static accent cannot trigger the lengthened grade, cf. above on Strunk (1985; 1987).
- In a first approximation, it seems advisable to treat each separately.
 - Lengthened grade is triggered by various and disparate factors.
 - Static accent is triggered by one factor only: lexical accent.

A crash course in PIE and Vedic morphological accent

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Every morpheme has a lexical specification for accent. Morphemes have
 - no lexical accent,
 - dominant lexical accent,
 - recessive lexical accent.
- Lexical accent in roots is always dominant.
- Dominant specifications win! If two equally strong specifications compete, the rightmost wins (opposite-to-default).
- Default accent is assigned if every morpheme in a word is lexically unaccented. Default accent in PIE and Vedic is leftmost accent. (BAP)

What's behind static paradigms: The case of root nouns

Narten roots

Götz
Keydana

mobile root nouns

acc.sg. /pād-am/ → /'pā.dam/

gen.sg. /pad-às/ → /pa.'das/

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

static root nouns

acc.sg. /nár-am/ → /'na.ram/

n.sg. /nár-às/ → /'na.ras/

- Nominal roots with lexical accent are rare.
- Static accent is not tied to lengthened grade, cf. *nár-* vs. *dvār-*.

Static root nouns in derivation

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbals
nouns

References

Hypothesis

A recessively accented suffix yields root stress iff the root has inherent accent, else the suffix is stressed.

Recessive suffixes:

- -à- in non-Vṛddhi formations: *padá-*, but *nára-*, *dvāra-*
cf. Debrunner (1954: 139,141)
(/pad + -à-/ → /pa.'da-/; /nár + à-/ → /'na.ra-/)
- -mànt- / -vànt-: *padvánt-*, but *gómant-*, cf. Kiparsky
(2010: 172)
(/pad + -vánt-/ → /pad.'vant-/; /gó + mànt-/ → /'go.mant-/)

Lexical accent in primary adverbs

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- primary adverbs / preverbs are either underlyingly accented or unaccented.
- evidence: adjectives in (recessive) *-añc-*:
 - *údañc-* (: *úd*), *ápāñc-* (: *ápa*), *nyañc-* (: *nî*)
(/úd + -añc-/ → /'udañc-/ etc.)
 - *anváñc-* (: *ánu*), *pratyañc-* (: *práti*)
(/anu + -añc-/ → /an.'vañc-/ etc.)
- lexical accent is rare in adverbs, too!

Lexical accent is attested in nouns and adverbs. So, what about verbs?

Program: Search for evidence for inherent accent in roots forming Narten presents!

Narten roots in noun formation

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbial
nouns

References

If Narten roots bear lexical accent,

the following prediction is supposed to hold:

- recessive deverbial affixes with Narten roots are always unaccented.
- recessive deverbial affixes elsewhere are accented.

How to identify recessive derivative morphemes without circularity

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

**Narten roots
in Vedic**

Narten roots
and deverbals
nouns

References

- Find an affix with accentological variation
 - which is regular,
 - which is not triggered by morphophonemics,
 - which seems to depend on the root.
- Show that roots inducing deviant accent also induce special paradigmatic accent.

Accent in the verbal paradigm

Narten roots

Götz
Keydana

mobile athematic present

3.sg. /vaś-ti/	→	/'vaṣ.ṭi/
3.pl. /uś-ànti/	→	/u.'śanti/
1.pl. /uś-mási	→	/uś.'ma.si/

Narten presents

Decon-
structing
Narten
presents

reduplicated present

3.sg. /bí-b ^h ar-ti/	→	/'bi.b ^h ar.ti/
3.pl. /bí-b ^h r-àti/	→	/'bi.b ^h ra.ti/
1.pl. /bí-b ^h r-mási/	→	/bi.b ^h r.'ma.si/

Narten roots

Narten roots
in Vedic

Narten present

3.sg. /tākṣ-ti/	→	/'tāṣ.ṭi/
3.pl. /tākṣ-àti/	→	/'tak.ṣa.ti/
1.pl. unattested		
but cf. perf.3.pl. /ta-tākṣ-úr/	→	/ta.tak.'ṣur/

Narten roots
and deverbal
nouns

References

Narten roots behave like acrostatic root nouns.

The least costly hypothesis: inherent lexical accent.

The limits of morphological accent in Vedic

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Vedic is in a transitory state between strict morphological accent and the later metrical system.
- Morphological accent is still the dominant pattern, but
 - in fully lexicalized derivatives, lexical specifications of individual morphemes tend to be lost:
máti- with BAP besides (original) *matí-* with dominant suffix,
 - accentological patterns spread throughout categories overriding lexical specifications:
deverbal root nouns always show mobile accent irrespective of the underlying lexical specifications, generalized root accent in *-nt-* participles of 1st class presents, although *ànt-* bears recessive accent (Debrunner 1954: 28; 161, 167).

A further example: deverbial *-a-*

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbial
nouns

References

- deverbial non-agentive *-a-* stems are attested with 2 Narten roots:
 - *gāhá-* ‘depth’
 - *stáva-* ‘praise’
- Debrunner (1954: 98): ‘die Nomina actionis als Simplicia barytoniert’
- But: Debrunner (1954: 101): ‘Oxytonese einfacher Nomina actionis stammt bisweilen aus dem Kompositum.’
- So what is the underlying representation of deverbial non-agentive *-a-*?
- Synchronically *-a-* and *-á-* exist side by side.

Testing the hypothesis

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbals
nouns

References

deverbals -*àn-*:

ukṣ- <i>àn-</i>	→	uk.'ṣaṇ-
pūṣ- <i>àn-</i>	→	pū.'ṣaṇ-
tákṣ- <i>àn-</i>	→	'tak.ṣaṇ-
rāj- <i>àn-</i>	→	'rā.jan-

Testing the hypothesis (2)

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- *-a(n)t-* has recessive accent. This is evident from patterns like *sunvántam* vs. *sunvaté*:
/sunv-ànt-am/ → /sun.'van.tam/
/sunv-àt-è/ → /sun.va.'te/
- (In thematic verbs of the 1st class root accent is generalized.)
- *-ant-* does not occur in unaccented contexts.
- Unaccented *-at-* is attested
 - in reduplicated presents throughout because of the dominant accent on the reduplicative syllable,
 - in Narten presents throughout.

Testing the hypothesis (2) *cont.*

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- So, why do Narten presents show *-at-*, just like reduplicated presents?
- The common denominator is the accent on the initial syllable:
/táḱṣ-àt/ → /'tak.ṣat/
/dā́ś-àt-aḥ/ → /'dā.śataḥ/
- *-at-* is thus an important argument for lexical accent in Narten roots.

Narten roots and athematic aorists

Kümmel (1998) argues for root aorists alongside Narten presents.

Are they a challenge for lexical accent?

- Augmented forms have accent on the augment throughout.
- The most convincing non-augmented examples are:
 - *kramur* (RV 7.32.27), unaccented,
 - *śramat* (RV 2.30.7), unaccented, no Narten present in Vedic,
 - *cyávam* (RV 2.265.10), Narten present probable.
- → attested root aorists of Narten roots are fully compatible with underlying lexical root accent.
- (*dánt-*, if from p.aor. **h₁dónt-*, is problematic. See, however, van Beek (2011: 51-2).)

Result

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- In Early Vedic, Narten roots exist.
- They are characterized by inherent lexical accent.
- Accent in the verbal paradigm as well as in derivations confirms this picture.
- The analysis can be extended at least to Indo-Iranian.
 - Since ablaut in the present stem is (partially) determined by accent – not vice versa – inherent lexical accent must be presupposed for Avestan.

Non-Narten roots with lexical accent

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

If lexical accent underlies Narten phenomena,

non-Narten roots should not dominate recessive accent in derivational morphemes.

- $d^{(h)}$ *ákṣat-*, *sákṣat-* (p.aor.), Narten (1964: 134):
“Analogien nach einem bestimmten Vorbild”, Hardarson (1993: 96): Archaismen.
 - re *sákṣat-* cf. p.prs. *sāhant-* (besides *sáhant-*), *sā^har-*, *ásād^há-*, ° *sāh-* (besides ° *sáh-*) (Klingenschmitt 1982: 129,fn.4)
 - remnants of an old Narten root?
- *-ùṣ[?]* in *tápuṣ-*, *cákṣuṣ-* etc. Rather, the affix seems to be unaccented, *janúṣ-* (animate in the sg.) being an exception (Debrunner 1954: 490).

Greek evidence?

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Probert (2006: 148): "... an inherent accent belonging to a root will only be apparent where there is no derivational suffix."
- Accented suffixes always win,
- unaccented suffixes are deaccenting,
- which leads to recessive accent.

What then about length?

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- The feature characterizing Narten roots is lexical accent.
- Static accent cannot trigger different ablaut grades (contra Kiparsky (forthcoming)).
- But it may block zero grades – though not categorically.
- Thus, Strunk's upgrading still seems to be the most promising scenario:
 - Lengthened grade was part of PIE morphonology.
 - Stressed syllables tend to have an increased duration (Fletcher 2010: 532).
 - Upgrading may thus have been induced by existing factors (channel bias and analytic bias, Moreton (2008), Garrett and Johnson (2013)).

References I

Narten roots

Götz Keydana

Narten presents

Decon- structing Narten presents

Narten roots

Narten roots in Vedic

Narten roots and deverbal nouns

References

- Blevins, J. and Garrett, A. (2004). The evolution of metathesis. In Hayes, B., Kirchner, R., and Steriade, D., eds., *Phonetically Based Phonology*, 117–156. Cambridge UP, Cambridge.
- de Vaan, M. (2004). "Narten" roots from the Avestan point of view. In Hyllested, A., Jørgensen, A. R., Larsson, J. H., and Olander, T., eds., *Per aspera ad asteriscos. Studia Indogermanica in honorem Jens Elmegård Rasmussen sexagenarii Idibus Martis anno MMIV*, 591–599. Inst. für Sprachwissenschaft, Innsbruck.
- Debrunner, A. (1954). *Altindische Grammatik*, vol. II,2. Die Nominalsuffixe. Vandenhoeck & Ruprecht, Göttingen.
- Fletcher, J. (2010). The prosody of speech: Timing and rhythm. In Hardcastle, W. J., Laver, J., and Gibbon, F. E., eds., *The Handbook of Phonetic Sciences*, 523–602. Blackwell, Oxford, 2nd edition.
- Garrett, A. and Johnson, K. (2013). Phonetic bias in sound change. In Yu, A. C., ed., *Origins of Sound Change. Approaches to Phonologization*, 51–97. Oxford University Press, Oxford.
- Hardarson, J. A. (1993). *Studien zum urindogermanischen Wurzelarist und dessen Vertretung im Indoiranischen und Griechischen*. Institut für Sprachwissenschaft, Innsbruck.
- Jasanoff, J. H. (2012). Long-vowel preterites in Indo-European. In Melchert, H. C., ed., *The Indo-European Verb. Proceedings of the Conference of the Society for Indo-European Studies, Los Angeles 13-15 September 2010*, 127–135, Wiesbaden. Reichert.
- Keydana, G. (2013). Ablaut in thematic nouns. *Indo-European Linguistics*, 1:1–24.
- Kiparsky, P. (2010). Compositional vs. Paradigmatic Approaches to Accent and Ablaut. In Jamison, S. W., Melchert, H. C., and Vine, B., eds., *Proceedings of the 21st Annual UCLA Indo-European Conference*, 137–181, Bremen. Hempen.
- Kiparsky, P. (forthcoming). Accent and Ablaut. In Weiss, M. and Garrett, A., editors, *Handbook of Indo-European Studies*. Oxford UP, Oxford.
- Klingenschmitt, G. (1982). *Das altarmenische Verbum*. Reichert, Wiesbaden.

References II

Narten roots

Götz Keydana

Narten presents

Decon- structing Narten presents

Narten roots

Narten roots in Vedic

Narten roots and deverbal nouns

References

- Kortlandt, F. H. (1987). Archaic ablaut patterns in the Vedic verb. In Cardona, G. and Zide, N. H., eds., *Festschrift for Henry Hoenigswald. On the occasion of his Seventieth Birthday*, 219–223. Narr, Tübingen.
- Kortlandt, F. H. (2004). Accent and ablaut in the Vedic verb. *Indo-Iranian Journal*, 47:7–15.
- Kümmel, M. J. (1998). Wurzelpräsens neben Wurzelaorist im Indogermanischen. *Historische Sprachforschung*, 111:191–208.
- Lipp, R. (2009). *Die indogermanischen und einzelsprachlichen Palatale im Indoiranischen. Band II. Thorn-Problem, indoiranische Laryngalkalisation*. Winter, Heidelberg.
- Matasović, R. (1997). Odrazi indoeurospkih Iringala u slavenskim jezicima. *Croatica*, 45/46:129–146.
- Melchert, H. C. (2013). 'Narten formations' versus 'Narten roots'. handout, Leiden.
- Moreton, E. (2008). Analytic bias and phonological typology. *Phonology*, 25(1):83–127.
- Narten, J. (1964). *Die sigmatischen Aoriste im Veda*. Harrassowitz, Wiesbaden.
- Narten, J. (1968). Zum „proterodynamischen“ Wurzelpräsens. In *Pratidānam. Indian, Iranian and Indo-European Studies presented to Franciscus Bernardus Jacobus Kuiper on his sixtieth birthday*, 9–19. Mouton, The Hague; Paris.
- Probert, P. (2006). *Ancient Greek Accentuation. Synchronic Patterns, Frequency Effects, and Prehistory*. Oxford University Press, Oxford.
- Sandell, R. (2014). The phonological origins of Indo-European long-vowel (“Narten”) presents. Ms.
- Schindler, J. (1994). Alte und neue Fragen zum indogermanischen Nomen. In Rasmussen, J. E., ed., *In honorem Holger Pedersen. Kolloquium der Indogermanischen Gesellschaft 1993 in Kopenhagen*, 397–400. Reichert, Wiesbaden.
- Schumacher, S. (2005). 'Langvokalische Perfekta' in indogermanischen Einzelsprachen und ihr grundsprachlicher hintergrund. In Meiser, G. and Hackstein, O., eds., *Sprachkontakt und Sprachwandel. Akten der XI. Fachtagung der Indogermanischen Gesellschaft, 17.-23. September 2000, Halle an der Saale*, 591–626, Wiesbaden. Reichert.

References III

Narten roots

Götz
Keydana

Narten
presents

Decon-
structing
Narten
presents

Narten roots

Narten roots
in Vedic

Narten roots
and deverbal
nouns

References

- Strunk, K. (1985). Flexionskategorien mit akrostatischem Akzent und die sigmatischen Aoriste. In Schlerath, B., ed., *Grammatische Kategorien. Funktion und Geschichte. Akten der VII. Fachtagung der Indogermanischen Gesellschaft, Berlin, 20.-25. Februar 1983*, 490—514, Wiesbaden. Reichert.
- Strunk, K. (1987). Further evidence for diachronic selection: Ved. *rāṣṭi*, lat. *regit* etc. In Cardona, G., ed., *Festschrift for Henry Hoenigswald on the occasion of his seventieth birthday*, 385—392. Narr, Tübingen.
- Tremblay, X. (2005). Iranian Historical Linguistics in the Twentieth Century. *Indo-European Studie Bulletin*, 11(1):1—35.
- van Beek, L. (2011). Vowel assimilation in Greek: the evidence reconsidered. In Krisch, T. and Lindner, T., eds., *Indogermanistik und Linguistik im Dialog. Akten der XIII. Fachtagung der Indogermanischen Gesellschaft vom 21. bis 27. September 2008 in Salzburg*, 49—58, Wiesbaden. Reichert.
- Villanueva Svensson, M. (2013). Tone variation among Baltic *ia*-presents. handout, Leiden.

Thanks to Tim Felix Aufderheide for his work and for valuable discussions!

Götz Keydana
Sprachwissenschaftliches Seminar
Georg-August-Universität Göttingen
Käte-Hamburger-Weg 3
D-37073 Göttingen
gkeydan@gwdg.de
www.keydana.de