Stressful Conversions

an Analysis of Internal Derivation within the Compositional Approach

Joseph Rhyne
joseph.rhyne@uky.edu

Andrew Byrd
andrewbyrd@uky.edu

University of Kentucky

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$$*tomh_1 \acute{o}s \rightarrow *t\acute{o}mh_1 os$$

General Overview

Ablaut

e-grade: **ped-* (PIE **péts* 'foot (gen.sg.)' > Lat. *ped-* 'foot')
o-grade: **pod-* (PIE **pódm̥* 'foot (acc.sg.)' > Gk. ποδ- 'foot')
ø-grade: **bd-* (PIE **bd-* 'foot' > Av. *fra-bd-əm* 'forefoot')
ē-grade: **pēd-* (PIE **pḗd(-su)* 'foot (loc.)' > OIr. *ís* 'beneath')
ō-grade: **pōd-* (PIE **pṓts* 'foot (nom.sg.)' ⟼ Goth. *fotus* 'foot')

More restricted ablaut

Ablaut

‘foot’: **pod-* (Eng. *foot*, Gk. ποδ-), **ped-* (Lat. *ped-*)
‘mind’: **ménti-* (Skt. *máti-*), **mn̥téi̯-* (Eng. *mind*, Lat. *ment-*)
‘father’: **pəh₂tér-* (Lat. *pater*), **pəh₂tr-és* (Lat. *patr-is*)
‘earth’: **dʰéĝʰōm* (Hitt. *tēkan*), **dʰəĝʰmés* (Hitt. *taknaš*)

PIE Athematic Nominal Classes: Erlangen School

	Acrostatic	Proterokinetic	Hysterokinetic	Amphikinetic
Strong	ó ø ø	é ø ø	ø é ø	é o ø
Weak	é ø ø	ø é ø	ø ø é	ø ø é
Strong	*$p\acute{o}ts$	*$m\acute{e}ntis$	*$p\text{ə}h_2t\acute{e}r$	*$d^h\acute{e}\hat{g}^h\bar{o}m$
Weak	*$p\acute{e}ts$	*$m\underset{\circ}{n}t\acute{e}\hat{i}s$	*$p\text{ə}h_2tr\acute{e}s$	*$d^h\text{ə}\hat{g}^hm\acute{e}s$

Different ablaut variants = Different paradigms = Morphology

General Overview

Problems with Paradigmatic Approach (Kiparsky, forthcoming):

1. Isolated to athematic nouns
2. Typologically strange – languages don't work this way
3. Descriptive in nature – not especially predictive nor falsifiable

General Overview

Assumptions of the Compositional Approach

1. Morphemes are underlyingly accented, unaccented, or trigger accents on other morphemes.
2. Morphemes are either dominant or recessive.
3. Only one accent surfaces in pronunciation – ictus.
4. Certain rules must be assumed to delete and insert accents to result in a single ictus.

General Overview

Assumptions of the Compositional Approach

1. Morphemes are underlyingly accented, unaccented, or trigger accents on other morphemes:

Northern Bizkaian Basque (Gussenhoven 2004:170-84):

- Accented roots: *arbóla* 'tree', *léku* 'place', *mái* 'table', *béste* 'other' (minority)
- Unaccented roots: *sagar* 'apple', *ama* 'mother', *itturri* 'fountain', *etxe* 'house' (majority)
- Pre-accenting suffixes: *-gas* (instr.), *-ak*, *-ata*, *-ara* (all plural)
- Unaccented suffixes: *-ra* (all.)

General Overview

Assumptions of the Compositional Approach

2. Morphemes are either dominant or recessive:

Tokyo Japanese (Tsujimura 1989):

Root	Rec. *-te* 'gerundive'	Dom. *(y)óo* 'infrml. tentative'
taó 'fall'	*taó-re-te*	*tao-re-yóo*
naó 'mend'	*naó-t-te*	*nao-r-óo*
ók 'get up'	*ók-i-te*	*ok-i-yóo*

General Overview

Assumptions of the Compositional Approach

3. Only one accent surfaces in pronunciation – ictus:

Northern Bizkaian Basque, Gernika dialect (Gussenhoven, ibid.):

- *sagar* 'apple' - *´ata* (pl.)- *´tik* (abl.) → *sagárretatik*
- *léku* 'place' - *´ata* (pl.) - *ra* (all.) → *lékuetara*
- *léku* 'place' - *ra* (all.) → *lékura*

General Overview

Assumptions of the Compositional Approach

4. Certain rules must be assumed to delete and insert accents to result in a single ictus

(1) Oxytone Rule
$\sigma \rightarrow \acute{\sigma}$ / $[\ldots\ \sigma]_{Stem}$ Infl
A final accent is assigned to all inflected polysyllabic stems.

Oxytone Accent Assignment

Skt. *vr̥t-á* 'turning' Skt. *tri-vŕ̥t-ā* 'threefold'

General Overview

(2) Vowel Syncope (Final)
*/e, o/ → ø / _ Ḿ.
Short mid vowels are deleted before accented morphemes.

Zero Grade

*/ph_2ter-s/ → *$pəh_2$*$t\acute{e}r$ (nom.sg.) */ph_2ter-és/ → *$pəh_2$*$trés$ (gen.sg.)

General Overview

(3) Basic Accentuation Principle (BAP):

1. The leftmost accented syllable of a domain retains the accent, all other accents are deleted.
2. If there is no accented syllable in the word, place the ictus on the leftmost syllable.

All words may have only *one* ictus.

PIE */u̯rt-m/ > Skt. *vŕ̥tam*

Accent & Ablaut Derivations: 'father' vs. 'brother'

	*/ph$_2$ter-/		
Inflection	pəh$_2$ter-m̥	pəh$_2$ter-éh$_1$	pəh$_2$ter-sú
Oxytone	pəh$_2$tér-m̥	pəh$_2$tér-éh$_1$	pəh$_2$tér-sú
ø-grade	—	pəh$_2$tr-éh$_1$	pəh$_2$tŕ̥-sú
BAP	—	—	pəh$_2$tŕ̥-su
(Sanskrit	*pitár-am*	*pitrā́*	*pitŕ̥su*)

← **Unaccented** Root

Accented Root →

	*/b^{h}réh$_2$ter-/		
Inflection	b^{h}ráh$_2$ter-m̥	b^{h}ráh$_2$ter-éh$_1$	b^{h}ráh$_2$ter-sú
Oxytone	b^{h}ráh$_2$tér-m̥	b^{h}ráh$_2$tér-éh$_1$	b^{h}ráh$_2$tér-sú
ø-grade	—	b^{h}ráh$_2$tr-éh$_1$	b^{h}ráh$_2$tŕ̥-sú
BAP	b^{h}ráh$_2$ter-m̥	b^{h}ráh$_2$tr-eh$_1$	b^{h}ráh$_2$ter-sú
(Sanskrit	*bhrā́tar-am*	*bhrā́tr-ā*	*bhrā́tr̥-s̥u*)

Therefore...

Compositional Approach = Typologically Grounded Hypothesis

Internal Derivation

"Internal derivation refers to zero derivation, marked only by a change in accent/ablaut type" (Kiparsky, forthcoming)

- Thematic: *$tomh_1$ *ós* 'cutting' → *$tómh_1$ *os* 'a cut'
- Acro → Amphi: *$\underset{\frown}{u}$*ódr̥* → *$\underset{\frown}{u}$*ed-ór-* 'water (collective)'
- Hystero → Amphi: *$pəh_2$ *tér-* → *h_1 *su-*$pəh_2$ *tór-* 'well-bred'
- Protero → Hystero: *b^h*ráh$_2$ *ter-* → *n̥-b^h*rah$_2$ *tér-* 'brotherless'

Internal Derivation

Kiparsky (ibid.) assumes that a "dominant unaccented null suffix erases the inherent accent of its barytone stem".

Thus, internal derivation triggered by a *silent* morpheme:

- *$tomh_1$-ó-s 'cutting' → *$tomh_1$o-∅-s → *$tómh_1$os 'a cut'
- *$\underset{\frown}{u}$ódr̥ 'water' → *$\underset{\frown}{u}$od-(o)r-∅ → *$\underset{\frown}{u}$ed-ór- 'water (coll.)'
- *$pəh_2$tér- → *$pəh_2$ter-∅ → *$h_1$su-$pəh_2$tór- 'well-bred'
- *$b^hráh_2$ter- → *b^hrah_2ter-∅ → *$\underset{\circ}{n}$-b^hrah_2tér- 'brotherless'

Why the accentual changes?

The Oxytone Rule and BAP generate the reconstructable patterns.

Internal Derivation

- But is such a silent morpheme learnable?
- How to determine learnability:
  - Metric #1: experimental Indo-European
  - **Metric #2**: phenomenon paralleled in other languages?
- It is true that "its accent and dominance features as well as the zero grade rule ablaut rule formulated here are typologically well supported" (Kiparsky, ibid.)
- But is the same true of a dominant zero morpheme?

Internal Derivation

1. Internal Derivation as Conversion :
   - *$\underset{\frown}{u}$ód$\underset{\circ}{r}$ → *$\underset{\frown}{u}$éd-or-
   - Eng. *convert* (v.) ∼ *convert* (n.)
2. Internal Derivation as Deaccentuation :
   - */$\underset{\frown}{u}$ód-or/ → *[$\underset{\frown}{u}$od-or] → *$\underset{\frown}{u}$éd-or-
   - *Káfka* [ˈkʰɑf.kə] + *-ésque* → *Kafkaésque* [kʰɑf.kə.ˈʔɛsk]
3. Internal Derivation as Morphological :
   - *$\underset{\frown}{u}$ód$\underset{\circ}{r}$ → *$\underset{\frown}{u}$éd-or-
   - Eng. *man* (sg.) ∼ *men* (pl.)

Conversion: an Overview

What is conversion?

Conversion is a derivational process that either links lexemes or creates new ones of the same form. It is a morphological technique that is parallel to affixation (Bauer and Valera 2005).

Conversion: an Overview

Types of Conversion

- One may identify three different types of conversion: **root-**, **stem-**, and **word-**based.
- Languages can maintain a distinction between all three, as in Italian:
  - Root-based Conversion in Italian: *ritárd-o/i* 'I/you delay' → *ritárd-o*.MASC 'delay'
  - Stem-based Conversion in Italian: *revoc-a-re* 'to revoke' → *la revoc-a* 'revocation'
  - Word-based Conversion in Italian: *sapere* 'to know' → *il saper-e, i saper-i* 'knowledge'

Conversion: an Overview

Types of Conversion

- Isolating languages, such as French and English, have much more word-based conversion, whereas strongly inflecting languages have more root- and stem-based conversion.
- Fr. *vivre* (V) 'to live' → *le vivre* (N) 'food stuff' (dominant plural)
- Contrast with:
  - Lat. stem-based *fin-i-s* 'end' → fin-i-re 'to end'
  - root-based: *duc-e-re* 'to lead' → *dux*, *duc-is* 'leader'

PIE?

Conversion: an Overview

Types of Conversion

- There are numerous examples throughout English, as it is a very productive method of deriving nouns from verbs and vice versa
  - *a hammer* (n.) → *to hammer* (v.)
  - *to convért* (v.) → *a cónvert* (n.)

Conversion: Semantic Parallels

Types of Conversion

In general, most instances of conversion/zero-derivation involve a change in word-class (although it could be a secondary word-class), most commonly N $\rightarrow$ V and V $\rightarrow$ N, a process very different from internal derivation.

Conversion: Semantic Parallels

- The changes in secondary word-class are much closer to what we see semantically in internal derivation in PIE.
- Instances of a conversion to a secondary word-class much rarer:
  - Mac. *Zdravo e da se jade po edno* **jabolko** *na den.* 'It is healthy to eat one apple a day' → *Imame sok od* **jabolko**. 'We have apple juice (lit. 'juice of apple').'
  - *jabolko*: from countable singular to uncountable plural
  - Cf. singular → collective: *$\underset{\frown}{u}$ódr̥ → *$\underset{\frown}{u}$edór

Conversion: Semantic Parallels

Semantic Conversions in PIE

There are a number of different semantic functions of internal derivation, including a shift to the collective and going from a more abstract to a more concrete noun, as well as going from a noun to an adjective and vice versa.

1. PIE **u̯ódr̥* 'water' → **u̯édōr* 'water (collective)'
2. Skt. *bráhman* (nt.) 'sacred formulation' → *brahmán* (m.) 'priest'
3. Gk. ψεῦδος 'lie' → ψευδής 'liar'
4. Gk. τομός 'cutting' → τόμος 'cut'
5. Ved. *yáśas-* 'splendor' → *yaśás-* 'splendid'

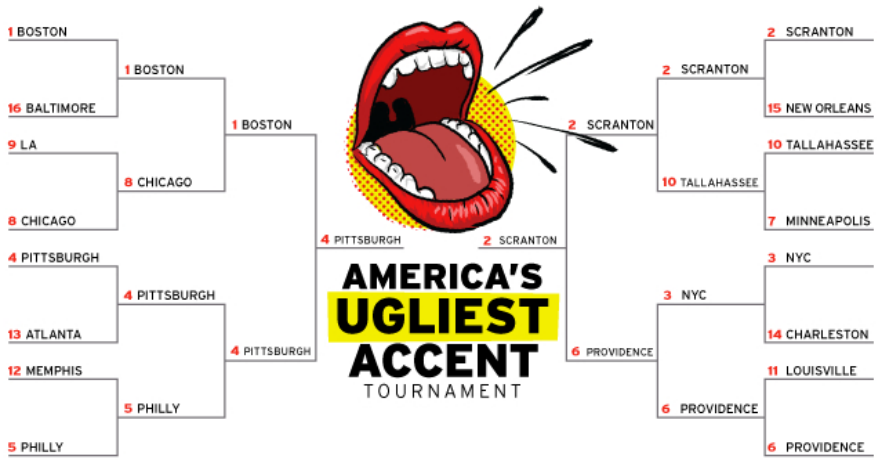
Conversion: Semantic Parallels

Semantic Conversions

- In both internal derivation and conversion, the two words that are the results of the operations must be "related in meaning to a sufficient degree" (Bauer and Valera 2005, 13).
- This does not help us predict what the exact meaning of the derived word will be, only that it must be sufficiently related.
- Contrast this with Eng. to plane 'smooth a piece of wood' and a plane 'aircraft,' which are not sufficiently semantically related enough to be linked by conversion.

Conversion: Phonological Parallels

- While by no means common, there are a few phonological parallels in conversion, where there are accentual shifts and vocalic alternations, as in examples of English conversion
  1. cónvert ([ˈkʰɑn.vɹ̩t]) → convért ([kʰn̩.ˈvɹ̩t])
     not ^{X}canvórt ([kʰn̩.ˈvɔɹt])



  2. Baltimore [ˈpʰəʊ.lis] ‘(1) police’ → [ˈpʰl̥is] ‘multiple police’

vowel reduction **predictable**	vowel replacement **not**

Conversion: Phonological Parallels

Phonological Parallels

- Checks out semantically!
- Not so much phonologically.

Internal Derivation as Conversion?

But the simple fact remains....

The phonological changes that occur in these classes are by-and-large restricted to these specific nominal categories:

$$*\underset{\frown}{u}\acute{o}d\underset{\circ}{r} \rightarrow *\underset{\frown}{u}edór\text{-}$$

1. $*pró$ 'forward' (Eng. *fro*) $\not\rightarrow {}^{X}peró$
2. $*d\underset{\frown}{u}\acute{o}h_1$ 'two' (Lat. $duō$) $\not\rightarrow {}^{X}de\underset{\frown}{u}\acute{o}h_1$
3. $*h_2\underset{\frown}{u}\acute{o}k\text{-}s\text{-}e$ 'grows' (OIce. *vexa*) $\not\rightarrow {}^{X}h_2\underset{\frown}{u}eg\text{-}ós\text{-}$

Deaccentuation: an Overview

Kiparsky, forthcoming: "dominant unaccented null suffix erases the inherent accent of its barytone stem"

What is deaccentuation?

We may informally define deaccentuation as the deletion of an underlying or derived accent that would otherwise surface as the ictus in the output.

Deaccentuation: Focus

- Typically in intonational languages like English – along with many, many other languages – deaccentuation functions as a process to indicate **new** and **given** information within a sentence (Gussenhoven 2011).
  1. There's no way she saw them in Toulouse. They **NEV**er set **FOOT** in the city.
  2. They haven't really seen much of London. I know that they've **NEV**er set foot in the **CIT**y.
- Unlikely to be relevant here.

Deaccentuation: Phonology

- Often deaccentuation will occur in languages to avoid instances of **stress clash**.

1. ˌTennes'see : 'Tennessee 'Titans
2. sar'dine : 'sardine 'sandwich
3. ˌJapa'nese : 'good Japa'nese

Deaccentuation: Morphology

- Sometimes certain general rules will trigger deaccentuation within a word or phrase, which is often restricted to certain morphological formations:

  (4) Initial Accent Deletion (English)
  Delete all accents except for the last in certain morphological formations.

1. a) ˌun'kind : un'kindness
   b) 'Rembrandt: Rembrand'tesque
2. a) ˌKiliman'jaro : Mount Kiliman'jaro
   b) ˌsixty-'one : route sixty-'one

Deaccentuation: Morphology

- It is especially common for deaccentuation processes to occur within compounds:

1. Japanese (Ito and Mester 2006)

   a) 'gogaku + 'kyooshi : gogaku 'kyooshi ‘language teacher’
   b) hi'tori + musu'me: hitori 'musume ‘single daughter’

2. Modern Greek (Nespor and Ralli 1993)

   a) 'spirto + ku'ti : spirto'kuti ‘match box’
   b) 'pefko + 'asos : pefko'asos ‘pine forest’

- According to Kiparsky (forthcoming), PIE was no stranger to this phenomenon:

1. Deaccentuation of second member in bahuvrihis:
   a) sahásra + dákṣiṇa- → *sahásradakṣiṇa-* 'worth 1000 (cows)'
   b) gó + vápus → *góvapus* 'having the form of a cow'

2. Sometimes a dominant suffix will erase any underlying accent:
   a) á- + prajás- + ta- → *aprajásta-* 'lack of progeny'
   b) ā́ditya- + devá- + ta- → *ādityádevata-* 'having the sun as deity'

Internal Derivation as Deaccentuation?

But like Kiparsky and others who assume the compositional approach, we have been unable to find a single language with a silent, dominant, unaccented derivational suffix that alters words in the ways proposed.

Lexical vs. **Postlexical**

Morphology

Internal Derivation = Purely Morphological

Tentative Hypothesis:

- There was no such thing synchronically in late PIE as a zero morpheme.
- Internal Derivation was at one point in time governed by an overt dominant morpheme *-X- and behaved in a similar way to compounds.

An overt morpheme existed at some point in early PIE and underwent some phonological change whereby it was deleted or reanalyzed

Compare to Compounds:

- Within Kiparsky's framework, external derivation and compounds are constructed in nearly the same way as his proposed Internal Derivation, with the main difference being that the morphemes here are overt.
- Most compounds simply follow the BAP:

1. Skt. *parjánya-rétas* → *parjányaretas* 'from Parjanya's seed' (bahuvrīhi)
2. *sarvá-rohita* 'completely red' (tatpuruṣa)

Internal Derivation as Morphology

- But for External Derivation and synthetic compounds, the affix added determines the accentual properties of the word.

1. In External Derivation, all morphemes used are dominant. Dominant morphemes determine the accent of the stem to which it is attached. E.g., Skt. *pitár* 'father' → *pitr̥mánt-* 'having a father,' where *-mánt-* is a dominant accented morpheme.
2. Synthetic compounds behave the same: the affix determines the accent of the compound because it is dominant or preaccenting. E.g.:
    1. Skt. *[[sóma][pī]thá]* → *somapīthá-* 'soma-drinking'
    2. Skt. *[[sóma][pe]ya]* → *somapéya-* 'soma-drinking'

Internal Derivation as Morphology

Pre-OE Class 2 Weak Verbs (Kastovsky 2005, 44-5):

Base	Stem-formative	Preterite	Ending	Function
wund	oj		an	infinitive
wund	oj		u	1s present
wund	∅/o		(o)s	2s present
wund	∅/o		(o)þ	3s present
wund	oj		aþ	3p present
wund	o	d	œ	1s preterite
wund	o	d	œs	2s preterite
wund	o	d	œ	3s preterite
wund	o	d	un	3p preterite

Base	SF	Preterite	Ending	Function
wund			ian	infinitive
wund			ie	1s present
wund			ast	2s present
wund			aþ	3s present
wund			iaþ	3p present
wund		od	e	1s preterite
wund		od	est	2s preterite
wund		od	e	3s preterite
wund		od	on	3p preterite

- Here, the derivation stem-formative has been reanalyzed as the preterite affix.
- Instead, a zero morpheme occupies the position of the stem-formative, **replacing something with nothing**.

Internal Derivation as Morphology

- In much the same way, the proposed affix *-X- could have been reanalyzed and its original purpose as a derivational morpheme was ultimately lost.

Pre-PIE **$\underset{\frown}{u}$*ed-or-X-* $\rightarrow$ **$\underset{\frown}{u}$*ed-ór-X-* $>$ PIE *$\underset{\frown}{u}$*ed-ór-*

- After this shift, the process of internal derivation is completely morphologized. The forms and alternations would need to be memorized.

Internal Derivation as Morphology

As was the case – to a some extent – in Sanskrit (Stump, forthcoming):

Declension of eight Sanskrit nominals
(nouns are masculine; adjectives* are in their masculine forms)

		RĀJAN 'king'	VIDVAṂS* 'knowing'	ĀTMAN 'self'	KARTṚ 'maker'	PITṚ 'father'	BHAGAVANT* 'fortunate'	PRATYAÑC* 'westerly'	NAYANT* 'leading'
SG	NOM	*rājā*	*vidvān*	*ātmā*	*kartā*	*pitā*	*bhagavān*	*pratyaṅ*	*nayan*
	VOC	*rājan*	*vidvan*	*ātman*	*kartar*	*pitar*	*bhagavan*	*pratyaṅ*	*nayan*
	ACC	*rājān-am*	*vidvāṃs-am*	*ātmān-am*	*kartār-am*	*pitar-am*	*bhagavant-am*	*pratyañc-am*	*nayant-am*
	INS	*rājñ-ā*	*viduṣ-ā*	*ātman-ā*	*kartr-ā*	*pitr-ā*	*bhagavat-ā*	*pratīc-ā*	*nayat-ā*
	DAT	*rājñ-e*	*viduṣ-e*	*ātman-e*	*kartr-e*	*pitr-e*	*bhagavat-e*	*pratīc-e*	*nayat-e*
	ABL	*rājñ-as*	*viduṣ-as*	*ātman-as*	*kartur*	*pitur*	*bhagavat-as*	*pratīc-as*	*nayat-as*
	GEN	*rājñ-as*	*viduṣ-as*	*ātman-as*	*kartur*	*pitur*	*bhagavat-as*	*pratīc-as*	*nayat-as*
	LOC	*rājan-i*	*viduṣ-i*	*ātman-i*	*kartar-i*	*pitar-i*	*bhagavat-i*	*pratīc-i*	*nayat-i*
DU	NOM	*rājān-au*	*vidvāṃs-au*	*ātmān-au*	*kartār-au*	*pitar-au*	*bhagavant-au*	*pratyañc-au*	*nayant-au*
	VOC	*rājān-au*	*vidvāṃs-au*	*ātmān-au*	*kartār-au*	*pitar-au*	*bhagavant-au*	*pratyañc-au*	*nayant-au*
	ACC	*rājān-au*	*vidvāṃs-au*	*ātmān-au*	*kartār-au*	*pitar-au*	*bhagavant-au*	*pratyañc-au*	*nayant-au*
	INS	*rāja-bhyām*	*vidvad-bhyām*	*ātma-bhyām*	*kartṛ-bhyām*	*pitṛ-bhyām*	*bhagavad-bhyām*	*pratyag-bhyām*	*nayad-bhyām*
	DAT	*rāja-bhyām*	*vidvad-bhyām*	*ātma-bhyām*	*kartṛ-bhyām*	*pitṛ-bhyām*	*bhagavad-bhyām*	*pratyag-bhyām*	*nayad-bhyām*
	ABL	*rāja-bhyām*	*vidvad-bhyām*	*ātma-bhyām*	*kartṛ-bhyām*	*pitṛ-bhyām*	*bhagavad-bhyām*	*pratyag-bhyām*	*nayad-bhyām*
	GEN	*rājñ-os*	*viduṣ-os*	*ātman-os*	*kartr-os*	*pitr-os*	*bhagavat-os*	*pratīc-os*	*nayat-os*
	LOC	*rājñ-os*	*viduṣ-os*	*ātman-os*	*kartr-os*	*pitr-os*	*bhagavat-os*	*pratīc-os*	*nayat-os*
PL	NOM	*rājān-as*	*vidvāṃs-as*	*ātmān-as*	*kartār-as*	*pitar-as*	*bhagavant-as*	*pratyañc-as*	*nayant-as*
	VOC	*rājān-as*	*vidvāṃs-as*	*ātmān-as*	*kartār-as*	*pitar-as*	*bhagavant-as*	*pratyañc-as*	*nayant-as*
	ACC	*rājñ-as*	*viduṣ-as*	*ātman-as*	*kartṝ-n*	*pitṝ-n*	*bhagavat-as*	*pratīc-as*	*nayat-as*
	INS	*rāja-bhis*	*vidvad-bhis*	*ātma-bhis*	*kartṛ-bhis*	*pitṛ-bhis*	*bhagavad-bhis*	*pratyag-bhis*	*nayad-bhis*
	DAT	*rāja-bhyas*	*vidvad-bhyas*	*ātma-bhyas*	*kartṛ-bhyas*	*pitṛ-bhyas*	*bhagavad-bhyas*	*pratyag-bhyas*	*nayad-bhyas*
	ABL	*rāja-bhyas*	*vidvad-bhyas*	*ātma-bhyas*	*kartṛ-bhyas*	*pitṛ-bhyas*	*bhagavad-bhyas*	*pratyag-bhyas*	*nayad-bhyas*
	GEN	*rājñ-ām*	*viduṣ-ām*	*ātman-ām*	*kartṝ-ṇ-ām*	*pitṝ-ṇ-ām*	*bhagavat-ām*	*pratīc-ām*	*nayat-ām*
	LOC	*rāja-su*	*vidvat-su*	*ātma-su*	*kartṛ-ṣu*	*pitṛ-ṣu*	*bhagavat-su*	*pratyak-ṣu*	*nayat-su*

Internal Derivation as Morphology

As was the case – to a some extent – in Sanskrit (Stump, ibid.):

Cross-classification of eight Sanskrit nominals by stem grade and Strong/Middle/Weakest alternation

				Exceptional	
	Strong	Middle	Weakest	Nsg	Lsg
Vṛddhi	RĀJAN VIDVAṂS ĀTMAN KARTAR			PITAR BHAGAVANT	
Guṇa	PITAR BHAGAVANT PRATYAÑC NAYANT		ĀTMAN		RĀJAN KARTAR PITAR
Zero		RĀJAN ĀTMAN KARTAR PITAR BHAGAVANT PRATYAÑC NAYANT	RĀJAN KARTAR PITAR BHAGAVANT NAYANT		
Suppletive		VIDVAṂS: *vidvat*	VIDVAṂS: *viduṣ* PRATYAÑC: *pratīc*		

Internal Derivation as Morphology

As was the case – to a some extent – in Sanskrit (Stump, ibid.):

Strong/Middle/Weakest alternations of eight Sanskrit nominals

	RĀJAN 'king'		VIDVAṂS 'knowing'		ĀTMAN 'self'		KARTAR 'maker'	
Strong	*rājān*	V	*vidvāṃs*	V	*ātmān*	V	*kartār*	V
Middle	*rāja*	0	*vidvat*	x	*ātma*	0	*kartṛ*	0
Weakest	*rājñ*	0	*viduṣ*	x	*ātman*	G	*kartr*	0
Nom sg	*rājā*	Vtr	*vidvāṃs*	V	*ātmā*	Vtr	*kartā*	Vtr
Voc sg	*rājan*	G	*vidvaṃs*	G	*ātman*	G	*kartar*	G
Loc sg	*rājan*	G	*viduṣ*	x	*ātman*	G	*kartar*	G

	PITAR 'father'		BHAGAVANT 'fortunate'		PRATYAÑC 'westerly'		NAYANT 'leading'	
Strong	*pitar*	G	*bhagavant*	G	*pratyañc*	G	*nayant*	G
Middle	*pitṛ*	0	*bhagavat*	0	*pratyac*	0	*nayat*	0
Weakest	*pitr*	0	*bhagavat*	0	*pratīc*	x	*nayat*	0
Nom sg	*pitā*	Vtr	*bhagavānt*	V	*pratyañc*	G	*nayant*	G
Voc sg	*pitar*	G	*bhagavant*	G	*pratyañc*	G	*nayant*	G
Loc sg	*pitar*	G	*bhagavat*	0	*pratīc*	x	*nayat*	0

As was the case – to a LARGE extent – in Old Irish (Green 1995:63):

GLENAID 'stick fast'
GLENAMON v.n.

PRESENT INDICATIVE (B IV)		
1s	*glenaim*	*·glenaim*
2s	*glenai*	*·glenai*
3s	glenaid	*·glen*
1p	*glenmai*	*·glenam*
2p	*glentae*	*·glenaid*
3p	*glenait*	*·glenat*
rel	*glenas*	
1p	*glenmae*	
3p	*glentae*	
pss	*glenair*	*·glenar*
3p	*glentair*	*·glentar*
rel	*glenar*	
3p	*glentar*	

IMPERFECT INDICATIVE		
1s		*·glenainn*
2s		*·glenta*
3s		*·glenad*
1p		*·glenmais*
2p		*·glentae*
3p		*·glentais*
pss		*·glentae*
3p		*·glentais*

IMPERATIVE	
2s	*glen*
3s	*glenad*
1p	*glenam*
2p	*glenaid*
3p	*glenat*
pss	*glenar*
3p	*glentar*

PRESENT SUBJUNCTIVE (ā)		
1s	—	*·gléu*
2s	—	*·glie*
3s	—	*·glia*
1p	—	*·gliam*
2p	—	*·gliaid*
3p	—	*·gliat*
rel	*glias*	
3p	glete	
pss	*glethir*	*·glether*
3p	*gletir*	*·gleter*
rel	*glether*	
3p	*gleter*	

PAST SUBJUNCTIVE		
1s		*·gliainn*
2s		*·gletha*
3s		*·gliad*
1p		*·glemais*
2p		*·glethae*
3p		*·gletais*
pss		*·glethae*
3p		*·gletais*

FUTURE (reduplicated)		
1s	*gíula*	*·gíulu*
2s	*gíulae*	*·gíulae*
3s	*gíulaid*	*·gíulai*
1p	*gíulmai*	*·gíulam*
2p	*gíultae*	*·gíulaid*
3p	gíulait	*·gíulat*
rel	*gíulas*	
1p	*gíulmae*	
3p	*gíultae*	
pss	*gíulaithir*	*·gíuilethar*
3p	*gíultir*	*·gíulter*
rel	*gíuilethar*	
3p	*gíulter*	

CONDITIONAL		
1s		*·gíulainn*
2s		*·gíulatha*
3s		*·gíulad*
1p		*·gíulaimmis*
2p		*·gíulaithe*
3p		*·gíulaitis*
pss		*·gíulaithe*
3p		*·gíulaitis*

PRETERITE ACTIVE (reduplicated)		
1s	*gíul*	*·gíul*
2s	*gíul*	*·gíul*
3s	*gíuil*	*·gíuil*
1p	*gíulammar*	*·gíulammar*
2p	*gíulid*	*·gíulid*
3p	*gíulatar*	*·gíulatar*
rel	gíulae	

Internal Derivation as Morphology

- The alternations cannot be predicted synchronically. They simply had to be memorized then, much as they had to be memorized when we learn them today.

Internal Derivation as Morphology

- Do such conclusions discredit the Compositional Approach?
- Not really, because – present problem excluded – it's:

1. More explanatory than the Paradigmatic Approach.
2. More typologically grounded than the Paradigmatic Approach.
3. More easily falsified than the Paradigmatic Approach.

Internal Derivation as Morphology

Instead of *u̯ódr̥ + ´∅ → *u̯edór-, we suggest:

Morphological shifts (à la Arabic) via morphological rules.

'Neuter acrostatic nouns → amphikinetic in the collective.' (vel sim.)

*/u̯ód(o)r/	→	*/u̯edor/
↑		↑
Compositional		**Compositional**


Bonjour
Ciao
Hola
Bok
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Thanks!

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