

# Why *I*? Indo-European *\*i*-stems and the Vedic *cákri*-type

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## 1 Introduction

### 1.1 The PIE suffix *\*-i-*

Three main functions:

#### 1. Adjectival abstracts

- (1) R(*ó/é*):  
Gk. ἄχρῖς / ὄχρῖς f. < *\*h<sub>2</sub>ó/ékri-* “height”,  
Lat. *ravis* f. “hoarseness”

- tendency to be associated with the Caland-system and occur as first compound member (FCM) with R(*Ø*) in exocentric compounds, e.g.

- (2) Av. *tižii-aršti-* “having a sharp spear”  
Gk. ἀργί-πους “quick-footed” etc.

#### 2. Verbal abstracts

- (3) R(*ó/é*):  
Gk. τρόπις f. “ship’s keel” (τρέπω “I turn”)  
Ved. *ájji-* m. “race” (*aj* “move forward, hurl”)

- (4) R(*é/é*):  
Gk. δῆρις f. “contest”  
OCS *rěcb* f. “speech”

#### 3. Agent nominals/ verbal adjectives, R(*óé*) (?)<sup>1</sup>

- (5) Gk. τρόφις “well-fed”  
Lat. *mōns, monti-* m. “mountain”

BUT apparently not a primary adjectival suffix:

- no cases of internal derivation (ID) of the (relatively well-attested) type (neuter) acrostatic substantive → proterokinetic adjective, denoting a possessive relation (Nussbaum (1998), Rau (1998), Pinault (2003), Widmer (2004)):

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<sup>1</sup>Nussbaum (2004).

- (6) a. \**krótu*/ \**krétu*- “strength” (Ved. *krátu*-, Av. *xratu*-) → \**krétu*-/ \**krt-éu*- “having strength; strong” (Gk. *κρατύς*)
- b. \**pólh<sub>1</sub>u*/ \**pélh<sub>1</sub>u*- “amount; plenty” (Gk. *πολύ*, Goth. *filu*) → \**pélh<sub>1</sub>u*-/ \**plh<sub>1</sub>-éu*- “numerous, many” (Ved. *purú*-)

- Cognate *i*-stems in the individual branches never correspond in word-class, e.g.:

- (7) Gk. *ἄργι<sup>ο</sup>* (< \**h<sub>2</sub>erǵi*-) “white/whiteness”; swift” : Hitt. *harki*- “white” - the latter is an adjective, the former (according to the Schindler-school of IE nominal composition) must go back to an substantival abstract

- The few unambiguous cases of *i*-adjectives are restricted to one particular branch, e.g.:

- (8) Ved. *hári*- “yellow”, YAv. *zairi*-/ *zāiri*- id.; Ved. *śúci*- “bright”

- Of these, a subset shows clear traces of reflecting older substantival abstracts that came to be used as adjectives via predicative/adverbial usage

- (9) Ved. *bhūri*- “many”, OAv. *būiri*- id. (Pinault (1998))  
Hitt. *nakki*- “heavy” (Widmer (2005))

## 1.2 The Vedic *cákri*-type

### 1.2.1 Synchronic features

- makes agent nouns/ verbal adjectives with iterative-intensive meaning<sup>2</sup>
- corresponds morphologically to the weak stem of the perfect of the respective roots<sup>3</sup>
- mildly productive in the RV (31 formations in total), distributed equally across the ten books, but lost in the Post-Rigvedic period
- has exact Avestan cognates

### 1.2.2 Why is this type interesting ?

1. There is an obvious mismatch between the synchronically associated verbal stem from which it seems to have been derived - the perfect stem - with its resultative/perfective semantics and the semantics of the *cákri*-type itself, namely durative/iterative/imperfective. This makes the perfect stem as derivational basis of the type suspicious
2. As seen, \*-*i*- was not primarily used to form adjectives, and certainly not “marked” adjectives derived from morphologically characterized tense/aspect-stems

Therefore, an investigation of the type should shed light on

- The function and prehistory of the PIE suffix \*-*i*- as inherited by Indo-Iranian
- The history of reduplicated nominal formations in IIr./IE<sup>4</sup>

<sup>2</sup>AiG II,2, 291 ff.

<sup>3</sup>Barschel (1986).

<sup>4</sup>On which most recently Oettinger (2010), but see also Rau (1998).

### 1.3 Synchronic features II: analysis of the syntactic behavior

What kind of deverbal formation are we dealing with? The literature so far offers two possibilities :

- a) essentially agent nouns which through predicative use came to be interpreted as adjectives
- b) essentially verbal adjectives or gerund-like formations.

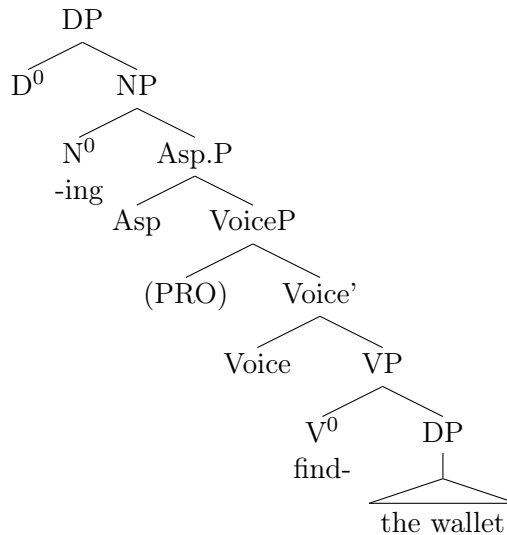
#### 1.3.1 Evidence from typology: Baker and Vinokurova (2009)

Properties of gerunds (so-called “mixed nominalizations”):

- Can be indefinite (*finding the wallet*)
- Can have overt tense/aspect marking (*having found the wallet*)
- assign structural case (*finding the wallet was not easy*)
- combine with adverbs (*having quickly found the wallet*)

These properties reflect which (functional) projection of the verb a given nominalizing suffix selects as its complement - distinction between agent, event and “mixed” nominalizations

(10)



Based on an examination of the syntactic behavior of the *cákri-* type, I will argue that this is synchronically a gerund/mixed nominalization.

#### 1.3.2 Core forms

1. **cákri-** “making, causing sth.; maker” (*kṛ* “do, make, act”), perf. *cakrur*. Compounds: *ācakrī-* “making, turning sth. into sth.”, *urucákri-* “creating unrestrictedness, boundlessness”.

(11) RV 6,24,5:

<i>anyád</i>	<i>adyá kárvaram</i>	<i>anyád</i>	<i>u</i>	<i>śvó</i>	<i>'sac</i>
different-A.SG.	today deed-A.SG.	different-A.SG.	PART	tomorrow	not.being-A.SG.
<i>ca sán</i>	<b><i>máhur</i></b> <i>ācakrír</i>	<i>índraḥ</i>			
and being-A.SG.	at once turning.into-N.SG.	Indra-N.SG.			

“A different deed today and a different one tomorrow, (thus) Indra makes the unreal at once real.”

(12) RV 2,26,4d:

*aṃhóś cid asmā urucákrir ádbhutaḥ*  
 narrowness-A.SG. even him-D. making.broad-N.SG. wonderful-N.SG.

“The wonderful one, creating unrestrictedness for him even in distress”.

A close parallel is found in Old Avestan, where *caxri-* occurs once:

(13) Y.34.7:

*yōi vaṇhəuš vaēdənā manəḥō səṇghūš*  
 who good-G.Sg. knowing-N.SG. thought-G.SG. proclamations-A.PL.  
*raēxənā aspəncīt sādrcīt caxraiō ušəurū*  
 inheritances-A.PL. misery-A.PL.-even sufferings-A.PL.-even turning.into-N.PL. ?

Bartholomae (AIW, 576): “die die .. Erbanteile durch ihre Lehren in Leid und Qual verkehren - ? - ”.

Insler (1975, 223): *aspən* and *sādrā* are modifying *səṇghūš* and *raēxənā*, respectively: “ ... who, through their possession of good thinking, make even immoral decrees and painful legacies disappear”

Humbach (1991, 141): “...who, knowing the bequests and legacies of good thought, turn any misfortune and distress into pleasure?”, where *aspən*<sup>o</sup> and *sādrā*<sup>o</sup> are turned into *ušəurū* (“pleasure”?).

Skjaervø (p.c.): No double accusative structure, one accusative object, *ušəurū* = I.sg.

2. **jāgmi-** “going quickly” (*gam* “go, move, come”), perf. *jagmur*. Optional accusative theme (“*Richtungsakkusativ*” or accusative of goal):

(14) RV 2,23,11a:

*anānudó vṛṣabhó jāgmir āhavám*  
 relentless-N.SG. bull-N.SG. approaching-N.SG. battle-A.SG.

“a relentless bull, approaching the fight ...<sup>5</sup>”.

Avestan: *\*jagmi-* is presupposed by the YAv. superlative *vījagmišta-* ““spreading out most””:

(15) Yt.1,4:

... *taṭ vīspahe aṇhəuš astuuatō mana*  
 this-N.Sg. all-G.SG. existence-G.SG. having.bones-G.SG. thoughts-A.PL.  
*asti vījagmištəm*  
 be-3.SG.PRES. spreading.out.most-N.SG.

“...this is what out of the whole material world spreads out most to the thoughts.”

3. **jāghni-** “beating, slaying” (*han* “beat, slay, kill”), perf. *jaghnur*. Compounds: N.sg. *nijaghnís* “beating sbdy. to the ground”.

<sup>5</sup>“Ein unnachgiebiger Bulle, gern in den Streit ziehend,” (Geldner 1951, I, 304).

(16) RV 9,61,20:

*jághnir*      *vṛtrám*      *amitríyaṁ*  
slaying-N.SG. resistance-A.SG. hostile-A.SG.

“(as) one who overcomes hostile resistance”

Avestan: superlative *jaγništa-* “who slays most” (Yt.11.3, Yt.12,8 and Y.71,7):

(17) Yt.11.3:

*sraoṣō*      *aṣuuō*      *driγūm*      *θrātō.təmō*      *hō*  
Sraoṣa-N.SG. sustaining.order-N.Sg. poor-A.Sg. most.protecting-N.SG. who  
*vərəθraja*      *drujəm*      *jaγništō*  
obstacle.smashing-N.SG. lie-A.SG. most.slaying-N.SG.

“It is Sraoṣa, sustainer of Order, who best protects the poor one, who, overcoming obstacles, beats down the Lie.”

(18) RV 9,53,2:

*ayá*      *nijaghnr̥*      *ójasā*      *rathasaṁgé*      *dháne*  
DEM-I.SG. beating.down-N.SG. strength-I.sg. chariot.race-L.SG. prize-L.SG.  
*hité*  
placed-L.SG:

*stávā ábibhyusā hṛdá*  
praise-SBJV.1.SG. brave-I.SG. heart-I.SG.

“With this [song] I shall praise with a brave heart, striking with strength in the chariot race when the prize has been set.”

4. **jághri-** “sprinkling, splashing” (*ghar* “sprinkle”), no perfect stem attested in the RV, possible comparandum = YAv. <sup>o</sup>*jaγri-* in the Hapax *Spən.jaγrīm* (name of a demon) in V.19,40.
5. **táturi-** “conquering, victorious” (*tṝ* “conquer, cross (over), overcome”). No formal correspondence to the attested perfect *tatāra/ titirus*.
6. **tútuji-** “attacking” (*tuj* “hurl, push forward, set in motion”). Perf. opt. 3.sg. *tutujyāt*, part. perf. mid. *tútujana-*. Compounds: A.sg. *átutujīm* “slow, lagging behind”.
7. **dadí-** “giving” (*dā* “give, donate”), perf. *dadur*, but also redupl. present stem (3.pl. *dádati*). Compounds: *ādadí-* “taking (away), receiving”, *parādadí-* “delivering, surrendering sth./sbdy.”, etc.

Adverbial modification, e.g. (19):

(19) RV 2,24,13:

*vṛudvéšā*      *ánu*      *vása*      *ṛṇám*      *ādadíḥ*  
hating.enemies-N.SG. along-PREP wish-A.PL. debt-A.SG. acquiring-N.SG.  
*sá*      *ha*      *vājī*      *samithé*      *bráhmanas pátiḥ*  
REL-N.SG. EMPH winner-N.SG. battle-L.SG. B.      P.

“Hating the enemy, collecting what he is owed as he wishes, Brahmanaspati is the victor in battle.”<sup>6</sup>

<sup>6</sup>“In der Feindschaft zäh, nach Wunsch die Schuld einziehend, ist Brahmanaspati im Kampf Sieger.”

8. **dādhi-** “placing, creating” (*dhā* “place, put/set down”), perf. *dadhur*, redupl. pres. 3.sg. *dadhāti*.
9. **papí-** “drinking” (*pā* “drink”), Perf. *papur*, cf. (19) for use with accusative objects.
10. **pápurī-** “procuring” (*pṛ* “provide, procure”). Perf. st. *pupūr-*. See the “Kuiper form” *pápri-* (see below 2. **pápri-**) without laryngeal effect.
11. **2. pápri-** “procuring” (*pṛ* “provide, procure”), see 10. above.
12. **babhrí-** “carrying, bearing” (*bhr* “carry, bear, bring”). Perf. stem *babhr-/jabhr-*<sup>7</sup>, part. perf. med. *babhrāṇá-*.
13. **vavrí-** m “hiding place” (*vṛ* “surround, restrain, lock in”). Perf. 3.pl. *vavrus*. Compounds: *ví-vavri-* “hiding place, cover”. Lexicalized in the meaning “shell” or “hiding place” (< \**that which (habitually) covers*”, Tichy (1995)), possibly to be compared to Av. *°vaoiri-* “skin, covering” (G.pl. *həm.vaoirinəm* “with skin” (said of milk)).
14. **sásni-** “winning repeatedly” (*san* “win, gain”). Perf. 3.sg. *sasāna*, perf. part. *sasavāṃs*.
15. **sásri-** “running” (*sṛ* “run”). Perf. 3.pl. *sasrús*, part. perf. act. *sasṛvāṃs-*, part. perf. mid. *sasrāṇá-*.
16. **sāsahí-** “victorious” (*sah* “defeat, overcome”), perf. 3.sg. *sāsāha/ sasāhe*, opt. *sāsahyāt*, mid. part. *sāsahānā-/ sehānā-*. Compounds: *viśāsahí-* “victorious, overcoming (competitors)”.
17. **súṣvi-** “(the one who is) pressing Soma” (*su* “press”). Pres. 3.pl. *susvati*, perf. 3.sg. *susāva*, part. perf. act. *susvāṃs-*, mid. *susvāṇá-*. Compounds: *ásuṣvi-* “not pressing Soma”.

#### 1.4 Peripheral forms

1. **°ānaśí-** “reaching” (*naś*), in N.sg. *vyānaśís* “reaching, penetrating”, perf. 3.sg. *nanāśa*, EWA II, 27f.
2. **°cācali-** “moving, staggering”, in N.sg. *āvīcācalis* “not staggering” (RV 10,173,1; 10,173,2), made to the root *cal*, a variety of *car* “move”.
3. **jáguri-** “tiresome, exhausting” may or may not be derived from the root \**gr* “be/make heavy, tired” (ved. *grāvan-* “stone”), but may also belong to *glāyati* “is exhausted” (Werba (1997, 403)), KEWA, III, 699).
4. **°jajñi-** “knowing” (*jñā* “know”, perf. 3.pl. *jajñur*) or “procreating continuously” (*jan-* “beget”, perf. 3.pl. *jajñur*), cp. Oldenberg (1912, 274), EWA I, 599ff., Tichy (1995, 280). Only one Rigvedic attestation, N.pl. *áprajajñayas* (10,71,9).
5. **tātrpi-** “nourishing” (*trp* “nourish oneself, become satiated/satisfied”). Part. perf. mid. *tātrpāṇá-*.
6. **dādhrṣi-** “bold, courageous” (*dhrṣ* “be bold, advance, attack”). Perf. 3.sg. *dadharṣa*, perf. part. act. *dadhrṣvāṃs-*.
7. **1. pápri-** “helping (across), saving” (*pṛ* “cross over, assist, preserve”). Redupl. 3.pl. *píprati*, Caus.Aor. *apīparan*, but no perfect or intensive stem attested in the RV.
8. **°śíśvi-** “growing” (*śū* “swell, grow (strong)”), in *súśíśvi-* “growing well” (A.sg.: 1,65,4). Perf. 3.pl. *śúśuvus*, Perf. part. act. *śúśuvāṃs-*, mid. *śúśuvāna-*.
9. **yayí-** “hurrying”, as a substantive: “storm” (*yā* “drive, move”). Perf. 3.pl. *yayús*.
10. **yúyudhi-** “pugnacious, eager to fight” (*yudh* “fight”). Perf. 3.pl. *yuyudhus*.

<sup>7</sup>A suppletive stem probably derived under the influence of the semantically closely related root *hr* “bring, hold”, cf. Mayrhofer, EWA II, 248, Hoffmann, AzI II, 45.

11. **yúyudhi-** “pugnacious” (*yudh* “fight”). This is clearly a variety of the better attested *yúyudhi-*, which would not have fitted into the break after an early caesura as well as the long reduplicated syllable does (RV 10,149,4).
12. **yúyuvi-** “keeping away, restraining sth./sbdy.” (*yu* “keep away, hold off, restrain sth./sbdy.”). No perfect, but pres. (*yuyoti*).
13. **vávahi-** “moving quickly” (*vah* “go, drive/draw a waggon, lead”), Perf. 3.pl. *ūhús*.
14. **vívici-** “distinguishing” (*vic* “separate, sieve, shake”). Pres. 2.sg. *vivekṣi*, Part. Perf. *vivikváms-*.

### 1.4.1 Summary

(20) Table: case assignment (simplex & compound forms, core and peripheral forms)

	Ø	A.	A. & A.	D.	A. & D.	G.	L.	adv.	adj.	Total
<i>dadí-</i>	6	9		1	3			3	2	19
<i>sāsahí-</i>	17					2 <sup>8</sup>		9 (?)		19
( <i>vavri</i> <sup>9</sup> -)	11	1				1			1	13)
( <i>súṣvi-</i>	11								1	11)
<i>cákri-</i>		6	1	1	1	1			1	10
<i>sásni-</i>	8	2						2	1	10
<i>jágmi</i> <sup>10</sup> -)	4	2				1			2	7
<i>táturi-</i>	5									5
<i>tūtují-</i>	5								1	5
<i>yayí-</i>	5									5
<i>pápuri-</i>	3			1						4
2. <i>pápri-</i>	1	1				1				3
<i>jághni-</i>	1	1						1		2
<i>babhrí-</i>	1	1								2
<i>yúyudhi-</i>	2									2
<i>jághri-</i>	1									1
( <i>tūtují-</i>						1				1)
<i>papí-</i>		1								1
<i>sásri-</i>							1			1
Total	81	24	1	3	4	7	1	6 (15 ?)	9	121

## 2 Explaining the *cákri*-type I: synchrony

### 2.1 The derivational basis: Perfect, intensive or reduplicated present

Three possible verbal stems present themselves *a priori* as candidates for the derivational basis of the *cákri*-type:

1. The perfect stem: because of the formal equivalence
2. The intensive stem: because of the semantic equivalence
3. The (-*a*-)reduplicated present stem: mainly because of the formal equivalence, but also because of the non-perfective (though not necessarily iterative or intensive) semantics

<sup>8</sup>In 2,23,3d *mṛdhas* could also be A.pl.

<sup>9</sup>Adjectival only in 10,99,5b *vívavri*.

<sup>10</sup>Without 10,106,8d, which is unclear.

### 2.1.1 Perfect

Unlikely candidate because of the diverging semantics of this stem vis-à-vis those of the reduplicated *i*-stems.

Furthermore, different semantics of verbal adjectives which are unequivocally derived from the synchronic perfect stem (*-u-*, *-vi-* participles)<sup>11</sup>:

(21) *jāgṛvi-* “wary, alert” (*jṛ-* “wake up”), perf. *jagāra* “has woken up” - YAv. *jaγāuru-*

(22) *jijyú-* “victorious” - *jigāya* “has conquered”

### 2.1.2 Intensive

Schaefer (1994): four formally different types of intensive formations.

Type I: (accented) long-vowel reduplication (e.g. *pāpaje* “stops, stands still repeatedly”), closely resembles certain long-vowel reduplicated perfects (except for the accentuation), which must occasionally have led to a confusion of the two formations, e.g.

(23) *dhar* “hold, support”, pf. *dādhāra* “has held” (RV+), int. st. *dárdhar-* vs. later *dādharti* (JB) and *dādhṛati* (TS), (Schaefer: int. presents backformed from the perfect stem)

(24) *ghṛ* “wake up”, pf. *jagāra* “is awake” (RV+), but also ptcp. *jāgrat-* (Schaefer: participle of the intensive-present stem later seen in AV *jāgrati* and MS *jāgārti*)

The long-vowel reduplication can in both cases be explained as due to compensatory lengthening following the loss of a PIE laryngeal:

(25) PIE perf. *\*h<sub>1</sub>ge-h<sub>1</sub>gór-e* > PIIr. *HjaHgāra* > Ved. *jāgāra*  
PIE int. *\*peh<sub>2</sub>-pVĝ-eĭ*<sup>12</sup> > PIIr. *páHpaĵai* > Vedic *pāpaje*

Assumption: The *cákri*-type was derived from the weak stem of the intensive. Because of a formal overlap between type I intensives and long-vowel reduplicated perfects, the derivational base was reinterpreted as belonging to the perfect stem, new *i*-formations were derived analogically from short-vowel reduplicated perfects:

(26) *tūtuj-* : *tútuji-*  
*sāsah-* : *sāsahí-*  
*cakr-* : X, X = *cákri-* etc.

Counterarguments:

- The long-vowel reduplicated *i*-adjectives are, apart from *sāsahí-*, rather marginal in the RV and hardly ever assign case
- Almost all the core forms and certainly all RV forms which have good Avestan cognates have *short-vowel* reduplication
- The long vowel in the initial syllable of these forms is probably secondary on metrical grounds; 26 out of 36 attestations occur in verse cadences, we may suspect metrical lengthening (thus already Arnold (1905)), especially in cases where we find both long- and short-vowel reduplication in the associated perfect stem as well (e.g. *tutuj-/tútuji-* and the case of *yáyudhi-/yúyudhi-*)
- Wouldn't we expect to see *i*-adjectives from intensive stems with full reduplication?

Conclusion: a priori an attractive solution, but poses too many problems on closer inspection

<sup>11</sup>Cf. Rau (1998).

<sup>12</sup>The root is *\*peh<sub>2</sub>ĝ* according to LIV<sup>2</sup>, but cf. Ved. *pajrá-* “solid”.



### 2.1.3 Reduplicated present

Synchronically, four of the reduplicated *i*-adjectives are associated with a reduplicated present stem:

- (27)
- *dadí-* “giving” : pres.3.sg. *dadāti*, pl. *dad-*
  - *dadhí-* “placing” : pres.3.sg. *dadhāti*, 3.pl. *dadhati*
  - 1. *pápri-* “helping across” : pres.3.sg. *píparti*, 3.pl. *píprati*. The accent on the reduplication syllable and the preserved *e*-grade in the corresponding *cákri*-formation are indications that this present once had PIE *\*e*/PIIr. *\*a*-reduplication.
  - *vívici-* “distinguishing” : pres.3.sg. *vivekṣi*, weak stem *vivic-* ?
  - *súṣvi-* : pres. 3.pl. *súṣvati*, although this is an inner-Vedic innovation (LIV<sup>2</sup>, 537f.)

Counterargument: This class is too small to be the starting point, and none of the *i*-stems associated with it are also attested in Avestan.

### 2.1.4 Reduplicated present II

An alternative: the *cákri*-type originated in a PIE reduplicated present/intensive formation rather than an IIr. one. Two recent proposals fit this:

- Jasanoff (2003): a subset of what became the classical PIE perfect started out as reduplicated present formation to “*\*h<sub>2</sub>e*-conjugation” aorists of the type 1.sg.  $C_1e-C_1óRC_2-h_2e$ , 3.pl.  $C_1e-C_1R̄C_2-ěr(s)$
- Oettinger (2006): posits a “proto-intensive” formally identical to Jasanoff’s reduplicated *\*h<sub>2</sub>e*-conjugation class from which the IE reduplicated present (*\*-mi*, *\*-si*, *\*-ti* ... set of endings), the IIr. intensive (full reduplication) and the IE perfect developed.

→ This would make the *cákri*-type an archaism

## 2.2 A synchronic template: unreduplicated verbal adjectives in *-i-*

Mostly deverbal adjectival *i*-stems attested as second compound members of (synchronically) verbal governing compounds:

### 2.2.1 FCM = substantive

- (28)
- *gṛbhi-* “seizing, grasping” (*gṛbh*), compounds: *durgṛbhi-* “difficult to reach, seize”, *pádḡṛbhi-* “grabbing the feet” (name of a demon, cf. EWA II, 68f.).
  - *dari-* “splitting, breaking” (*dṛ*), *godari-* “splitting out cattle”.
  - *bhári-* “carrying, bearing” (*bhr*), in *sahobhári-* “bringing strength”.

### 2.2.2 FCM = preverb or adverb

- (29)
- *jri-* “extending, stretching” (*jri*), *urujri-* “extending, stretching widely”, *párijri-* a “stretching out in all directions”.
  - *tují-* “hurling” (*tuj*), *átují-* “hitting, striking”.
  - *yají-* “offering, sacrificing” (*yaj*), in *āyají-* “bringing, procuring”.

### 2.2.3 Simplex deverbal *i*-adjectives

- (30) a. *añjī-* “anointing”, but more often “ointment” (*añj*), compounds: *vṛṣadañjī-* “raining ointment”, *svédañjī-*, “having sweat as ointment, oiled with sweat”.
- b. *sanī-* m “winning, procurement, gain” (*san*), compounds: *ūrjasanī-* “bestowing power”, *goṣāñi-* “winning, procuring cows”, *pitusañi-* “granting, giving food”, etc.
- c. *svarī-* “sounding, roaring” (*svar*).
- d. *śúci-* “bright, gleaming” (*śuc*).

This type may well have provided the *synchronic* template for using the suffix *-i-* to derive adjectives from other characterized stems as well - NB the combination with preverbs, as with the *cákri*-type!

## 3 Explaining the *cákri*-type II: The diachronic perspective

As seen above, PIE *\*-i-* was apparently used to derive of masculine endocentrics/agent nouns. Here are some examples given by Nussbaum (2004):

- (31) a. Av. *tiγra-* “sharp” : *tiγri-* m. “arrow”
- b. PIE *\*m̥ntó-* “projecting” (Lat. *mentum* “chin”) : *\*monti-* “that which projects (Lat. *mōns* “mountain”)
- c. PIE *\*h<sub>2</sub>ékró-* “high, pointed” : *\*h<sub>2</sub>ó/ékri-* “that which is high/ pointed” (Lat. *ocris*)

Nussbaum:

- This type tends have a development similar to what gave the Germanic “weak adjectives”
- Probably the origin of the Latin *tenuis*, *gravis* etc. type and presumably also formations like Ved. *jívri-* “lively”<sup>13</sup>

This function seems to have originated in the adjectival *\*-o-*stem : substantival *\*i-*stem phenomenon associated with the stative/property-concept roots of the Caland system.

From this starting point, the suffix could easily have developed

- into a deverbal suffix deriving agent nominalizations from any verbal root (i.e. not restricted to the Caland-system any more)
- adjectival/predicative usage as in the Germanic weak adjectives or the Vedic *dátar*-type, which makes agent nominals denoting a habitual agent, are mostly used predicatively and can assign structural case<sup>14</sup>, e.g. (32)

- (32) RV 6,23,4:

<i>gántéyānti</i>	<i>sávanā</i>	<i>háribhyām</i>	<i>babhrír</i>	<i>vájram</i>	
visitor-N.SG.-so.many-A.PL.	sacrifices-A.PL.	yellow-I.DU.	carrying-N.SG.	cudgel-A.SG.	
<i>papíḥ</i>	<i>sómaṃ</i>	<i>dadír</i>	<i>gáḥ</i>	<i>kártā</i>	<i>vīraṃ</i>
drinking-N.SG.	Soma-A.SG.	giving-N.SG.	cows-A.PL.	maker-N.SG.	hero-A.SG.
<i>náryaṃ</i>	<i>sárvavīraṃ</i>	<i>śrótā</i>	<i>hávaṃ</i>	<i>gṛṇatā</i>	
manly-A.SG.	leading.all.heroes-A.SG.	listener-N.SG.	call-A.sg.	praising-G.SG.	
<i>stómavāhāḥ</i>					
receiving.praise-N.SG.					

<sup>13</sup>Cf. Pinault (1987-1988).

<sup>14</sup>Tichy (1995, 50ff.).

“The one who visits so many Soma sacrifices with his pair of duns, carrying the cudgel, drinking Soma, giving cows, making the manly hero the leader of all heroes, listening to the call of the praising one as one who receives praise.”

Here, the reduplicated *i*-adjectives and the *tar*-formations behave identically with respect to syntax/meaning.

## 4 Conclusion

- PIE \*-*i*- was inherited by Proto-IIr. as an agent nominalizer which was already on its way to becoming a participle/“mixed nominalization”.
- Once a sufficient number of agent nominals of the structure R-*i* existed, the reinterpretation of this derivation as being a deverbal rather than a denominal one meant that such a nominal could be formed to every root without necessarily needing a thematic adjective as an intermediate step in the derivation.
- Extending the use of this suffix to characterized tense/aspect stems was probably facilitated by a parallel development seen in the suffix \*-*u*, cp. Ved. *jīgīṣa-* (desiderative st. of *jay* “prevail, conquer”) : *jīgīṣú-* a “wishing to prevail”
- The derivational basis of the *cákri*-type was NOT the perfect, but most likely a (iterative-intensive ?) present formation as envisaged by Jasanoff and/or Oettinger.
- Within IIr., the formation developed into gerund-like nominalization with “mixed” features, which explains its syntactic behavior.

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