

of functional and semantic parallels like *miḍahuuacā* 'possessing false speech' (Gāthic: Y. 31.12, 49.9), whose combining and neut. sandhi forms are *miḍahuuacas*. The functional coincidence of the two forms, the phonological ambiguity in some sandhi positions, and the salient lengthening found in the nom. sg. m. **-as-* stem (almost) exclusively in possessive value triggered the remodelling of the possessive **-vant-* stem. The **-vant-* stems of appurtenance and the ordinary *-ant-* present participle escape the remodelling because they are functionally distinct.

Thus, the Avestan nom. sg. m. **-vās* to **-vant-* stems can be explained independently of the **-vāms* of its Vedic counterpart, and a mysteriously generated suppletion need not be assumed for the Proto-Indo-Iranian paradigm.

JAY H. JASANOFF

The Ablaut of the Root Aorist Optative in Proto-Indo-European

The mark of the PIE optative was an ablauting suffix **-iéh₁-*, **-ih₁-*, which was added to present stems to make the present optative and to aorist stems to make the aorist optative¹. The rules for the formation of the present optative can be stated with some precision:

- a) "hysterokinetic" athematic presents (e.g., nasal presents and root presents of the type **h₁és-ti* 'is': **h₁s-énti* 'are') added **-iéh₁-* to the zero-grade of the present stem in the active singular, and **-ih₁-* elsewhere, with displacement of the accent to the endings (cf. OLat. 3 sg. *siet*, pl. *sīmus*, *sient*; Gk. *εἶη*, *εἶμεν*, *εἶεν*; PIE **h₁s-iéh₁-* / **h₁s-ih₁-*)²;
- b) other athematic presents (e.g., reduplicated presents and presents with "Narten" ablaut) added invariant **-ih₁-* to the weak stem, with retention of the accent on the stem (cf. Lat. *uelit*, *-īmus*, *-int*, Go. *wili*, *-eima*, *-eina*, OCS *velitō*, *-imō*, *-etō*; PIE **uél(h_x)-ih₁-*, indic. **uél(h_x)-* 'wish, choose')³;
- c) thematic presents added invariant **-ih₁-* directly to the *o*-timbre of the thematic vowel, again with retention of the accent on the stem (cf. Ved.

¹ I would like to thank Stanley INSLER for his valuable comments on an earlier version of this paper. Any remaining errors are, of course, my own.

² The perfect optative, which will not be discussed here, seems to have been formed according to the same rule (cf. Ved. *véda* 'knows', opt. *vidyār*; Go. *wait* 'id.', opt. *witi*).

³ In my view, Lat. *uolō* and OLith. *pa-velmi* 'I wish, allow' go back to a present of this kind, rather than to a root aorist secondarily used as a present, as claimed by HOFFMANN (1968: 5 ff.). To be sure, the root **uel(h_x)-* also made a root aorist, which appears in Ved. 3 sg. in *vṛta*, opt. *vurita*; but Ved. *vṛṇite* 'chooses' is a replacement of PIE 3 sg. act. **uél(h_x)-ti* or 3 sg. mid. **uél(h_x)-tor*. Another originally aoristic root which formed a Narten present was **h₁ed-* 'eat' < 'bite' (cf. Lat. 3 sg. *ēst*, opt. *edit*, etc.), the earlier sense of which is still detectable in **h₁d-ont-* 'tooth' (cf. Gk. *ὀδούς*, etc.; personal communication of J. SCHINDLER).

bhāret, pl. *-ema*, *-eyur*, Gk. *φέρου*, *-οιμεν*, *-οιεν* Go. *bairai*, *-aima*, *-aina*; PIE **bhéro-ih₁-*, indic. **bhéro/o-* 'bear').

The rules for the aorist optative, however, are less clear. Only in the case of the thematic aorist (type Ved. *ávidat* 'found', Gk. *εἶ(φ)ιδε* 'saw') do the optative forms attested in Indo-Iranian and Greek conform to the pattern of the corresponding present optatives (Ved. *vidét*, Gk. *(φ)ῖδοι*, etc., like *bhāret*, *φέρου*). The behavior of the sigmatic aorist, which with its inherited **ē*: **ē* ablaut and fixed root accent (cf. Ved. 3 sg. *ávāt* 'conveyed', subj. *vákṣat* < *uēḡh-s-*) might have been expected to form a "Narten" optative with invariant **-s-ih₁-*, is in fact conspicuously irregular. No active *s*-aorist optatives are found at all in Indo-Iranian — a significant morphological anomaly which will figure prominently in the discussion that follows⁴. In Greek, where there are two distinct and competing *s*-aorist optative formations, one (the type *δείξαι*, *-οιεν* (: *δείκνυμι* 'I show')) is patently late and analogical, while the other (the misnamed "Aeolic" type *δείξειε*, *-οιαν*) remains unexplained.

The optative of the root aorist presents difficulties as well. In Vedic Sanskrit the normal root aorist optative shows the predictable zero grade of the root followed by *-yā-/ -i-*; cf. 3 sg. *ṛdhyāh*, 1 pl. *ṛdhyāma*, mid. *ṛdhīmāhi* (: *ṛdh-* 'thrive'); further 3 sg. *śrūyāh* (: *śru-* 'hear'), *bhūyāh* (: *bhū-* 'be'), *vṛjyāh* (: *vṛj-* 'twist'), *gamyāh* (: *gam-* 'go')⁵. Significantly, however, this pattern does not extend to roots in *-ā-*, which make irregular optatives in *-eyā-* in the Rigveda (cf. 1 sg. *deyām* (: *dā-* 'give'); *dheyām*, 3 pl. *dheyur* (: *dhā-* 'put'); 2 sg. *jñeyāh* (: *jñā-* 'know'), 3 sg. *peyāh* (: *pā-* 'drink'), 1 pl. *stheyāma* (: *sthā-* 'stand')). The occasional trisyllabic scansion of these forms (*(d(h)aiyām*, etc.) shows that they continue sequences of the type **dhā-+-i-/-iā-* or *dheh₁-+-ih₁-/-iēh₁-*, with full grade of the root syllable⁶. In principle, this vocalism could be secondary, just as the full grade of Gathic Avestan 3 sg. opt. *dāiiā* is secondary beside the zero grade of older *dūiā*, 1 sg. *dūiā* (see below). But no attempt to explain the sequence *-eyā-* can ignore the wider evidence for

⁴ As will be seen below, YAv. opt. 3 sg. *zahñ* (: *zā-* 'win') is a late replacement of the root aorist optative **za-i-* cf. GAV. 1 pl. *zaēmā*.

⁵ Like all 3 sg. root aorist optatives in the Rigveda, these forms show the substitution of *-yāh*, with "precativ" *-s*, for expected *-yāt*.

⁶ The metrical evidence thus argues against INSLER (1975), who identifies the *-e-* of *dheyām*, etc' with the *-e-* (< **-o-ih₁-*) of the thematic aorist optative type *vidét*.

full-grade vocalism in the root aorist optative, evidence first assembled over twenty years ago by Karl HOFFMANN (1968).

According to HOFFMANN, the Gathic Avestan 1 pl. aorist optatives *varəzīmācā* (: *varz-* 'perform'), *srauuimā* (*srauu-* 'hear') and *zaēmā-cā* (: *zā-* 'win' (< **leave behind*, Ved. *hā-* 'leave') directly continue PIE preforms *uērg-ih₁-me*, *kḷéu-ih₁-me* and *ghéh₁-ih₁-me*, with the same radical full grade as in the aorist indicative/injunctives Ved. 1 pl. *áganma*, *ákarma* (: *kṛ-* 'do'), *dhāma*, and Gk. *ἔβημεν* (: *βᾶ-* 'go'), *ἔστημεν* (: *στᾶ-* 'stand'), *ἔγνωμεν* (: *γνω-* 'know'). The evidence of these forms, and of *zaēmā* in particular, suggests that the *dheyā*-type may have had its starting point in weak forms of the type 1 pl. **dhéh₁-ih₁-me*, **déh₃-ih₁-me* and **stéh₂-ih₁-me*. A pre-Sanskrit **dhāīma*, supported by **dhāīta* in the 2 pl., could easily have triggered the creation of an analogical singular **dhaiyām*, *-aiyāh*, *-aiyāt*, the sequence **-aiyā-* (> **eyā-*) would then have replaced **-āi-* in the plural, just as *-yā-* replaced **-i-* in the optative of the present (cf. 1, 2 pl. *syāma*, *syāta* for earlier **sīmá*, **sītá* (: Lat. *sīmus*, *sītis*)). Such an explanation finds support, in HOFFMANN's view, in the corresponding Greek optatives *θείην* : *θείμεν*, *δοίην* : *δοίμεν* and *στοίην* : *στοίμεν*. Neither the stem-form *θείη-* nor *θεί-* can be referred to a canonical PIE preform; the traditionally reconstructed strong stem **dhh₁-(i)jéh₁-* would have given **θίη-* or **θέη-* in Greek, while the weak stem **dhh₁-ih₁-* would have given **θi-*. The assumption of a PIE **dhéh₁-ih₁-me*, **dhéh₁-ih₁-te*, with full grade, would permit a direct phonological derivation of *θείμεν*, *θείτε*, from which *θείην*, like *dheyām* in Sanskrit, could be explained by analogy⁷.

The proposed equation of Il. **dhāīma* with Gk. *θείμεν* is instantly appealing, but it raises as many questions as it answers. Was the stem **dhéh₁-ih₁-* confined to the plural, or was it also used in the singular? If **dhéh₁-ih₁-* was common to both singular and plural, what interpretation should be placed on the obviously archaic GAv. *dūiā* and *dūiā*? Were all root aorist optatives made in the same way, or do forms like GAv. 1 pl. *buiiāmā* (: YAv. 3 sg. *buiiā*) and *jamiiāmā* (: 3 sg. *jamiiā*) point to the existence of a second optative type with the ablaut pattern of present optatives like **h₁s-iéh₁-/ *h₁s-ih₁-*? HOFFMANN does not confront these issues in his 1968 paper⁸, but he touches on

⁷ An obvious model for the creation of *θείην* from *θείμεν* would have been the present optative type *είην*, *είμεν*, where the stem of the singular added *-η-* to the stem of the plural.

⁸ His silence is deliberate: "außer Betracht soll hier die Frage bleiben, wie die anderen Personalformen des Aorist-Optativs im einzelnen strukturiert waren" (p. 7).

them in a later study (1976: 606¹). Here he states that the 1 pl. form *zaēmā* < **ǵhéh₁-ih₁-me* implies a Proto-Iranian 3 sg. **ǵa-t-t* < **ǵhéh₁-ih₁-t*; such a form, he claims, is actually preserved in YAv. opt. 3 sg. *vainū* < **uén-ih₁-t* (: *van-* 'win, obtain'). HOFFMANN's view is taken up and elaborated on by KELLENS (1984: 362 f.), who identifies three layers of root aorist optatives in Avestan: 1) the inherited type, with invariant full grade of the root and zero grade of the mood sign (*varəzīmā*, *srauuīmā*, *zaēmā*, **daēmā* (= pre-Skt. **dhāīma*), *vainū*); 2) the main innovated type, modeled on the optative of the present, with zero grade of the root and full grade of the mood sign (*diiā*, *buiiā*, *jaiiāmā*, etc.)⁹; and 3) the still later type seen in GAv. *dāiiā*, YAv. 2 sg. *dāiiā*, with *-iā-* as in 2), but with full grade substituted for zero grade in the root syllable.

KELLENS' system is not very satisfactory. The bulk of the evidence for full grade in the root aorist optative comes from the plural: the only certain example of a full-grade form in the active singular is *vainū*¹⁰. It is difficult to believe that an inherited pre-Avestan 3 sg. **daē* or **da-t-t* would have been remade to *diiā* in Gathic, where the zero grade *d(i)-* is already in full retreat before the dominant root allomorph *dā-*. Nor is it clear why Sanskrit, if it had inherited a 3 sg. opt. **dhét* < **dhéh₁-ih₁-t* beside 1 pl. **dhéma* < *dhéh₁-ih₁-me*, would have remade **dhét* to **dheyāt*; **dheyāt* (whence the quasi-attested **dheyāh*) is much easier to explain as a replacement of **dhīyāt* (= *diiā*) under the influence of **dhéma*. Even in Greek, the type 3 sg. *θείη* is more naturally taken from from **θ(i)η*, with secondary *-ei-* for *-i-* under the influence of *θείμεν*, than from **θēi* (< *dhéh₁-ih₁-t*), with *-η* borrowed from the optative of the present¹¹. For "long-vowel" roots, at least, the comparative evidence points to a 3 sg. **dhh₁-(i)jéh₁-t* with 1 pl. *dhéh₁-ih₁-me*, rather than to Kellens' *dhéh₁-ih₁-t* : *dhéh₁-ih₁-me*, as the PIE paradigm.

⁹ In the middle, types 1) and 2) were alike; both, in KELLENS' scheme, had zero grade of the root and zero grade of the mood sign.

¹⁰ From a purely phonological point of view, the root syllable of *vainū* could also represent an old zero grade, although the zero grade of the following optative suffix makes this distinctly unlikely. Formally similar, though morphologically unclear, is YAv. *θrauu*, but this could equally well be the optative of an acrostatic present *θrāuu-* (cf. HOFFMANN (1976: 607)). The 2 sg. middle form *xšnuuśā* is discussed below.

¹¹ In particular, it is difficult to see how a pre-Greek **θ(i)η* could have given anything but *θείη*; **θēi*, on the other hand, could plausibly have been remade to **θēie* (cf. *δείξετε*), or even escaped remodeling altogether.

The possibility of an inflectional pattern *dhh₁-(i)jéh₁-t* : *dhéh₁-ih₁-me* is not seriously considered by HOFFMANN or his followers. The reasons are obvious: the evidence for *dhh₁-(i)jéh₁-* is compromised by the full grade root of *vainū* < **uén-ih₁-*, while the putative strengthening of **dhh₁-* to **dhéh₁-* in the weak stem **dhéh₁-ih₁-* has no parallel in any other IE morphological category¹². Neither of these objections, however, is decisive. *diiā* and *vainū* do not necessarily belong to the same formation: *diiā* is the optative corresponding to the root aorist indicative/injunctive *dāt*, Ved. (*á*)*d(h)āt*, while *vainū* is synchronically the optative of the *s*-aorist *vāns-* (cf. GAv. *vas*, subj. *vanghat*, Ved. *vāmsi*, *vāmsat*, etc.). As noted repeatedly by HOFFMANN (1967: 32 f.; 1968: 4⁴; 1976: *ibid.*), the pairing of an *s*-aorist indicative/injunctive/subjunctive with a root aorist optative is a recurrent pattern in Indo-Iranian; other examples include Ved. *yauṣ-*, opt. *yūyā-* (: *yu-* 'restrain'), *sāks-*, opt. *sahyā-* (: *sah-* 'conquer'), and *aviṣ-*, opt. *avyā-* (: *av-* 'favor'). As long as the origin of this idiosyncratic suppletion is disputed, there can be no certainty that the ablaut pattern of "true" root aorist optatives like that of **dhéh₁-* was the same as that of "substitutive" root aorist optatives like that of **uén-*. For this reason it will be useful to distinguish in principle between root aorist optatives of type I and type II, corresponding to the Indo-Iranian and Indo-European precursors of *diiā* and *vainū*, respectively. A similar distinction is recognized by NARTEN (1984), who sets up an originally hysterokinetic paradigm (**dhh₁-(i)jéh₁-t* : **dhh₁-ih₁-mé*) for type I and an acrostatic paradigm (**uén-ih₁-t* : **uén-ih₁-me*) for type II. Reflexes of type I, in her view, include the forms in KELLENS' second class (*diiā*, *buiiā*, *jaiiā*, etc.); reflexes of type II, other than *vainū* itself, include *varəzīmā* and *zaēmā*, both of which correspond to sigmatic aorists outside the optative (cf. GAv. subj. 3 pl. *varəšant*; YAv. opt. 3 sg. *zahū*, rebuilt under the influence of the indicative stem **zāh-* = Ved. *hās-*). The only forms not accounted for in this framework are *srauuīmā*, for which we should have expected type I **sruuīmā* or **sruuiāmā*, with zero-grade of the root (cf. Ved. indic. *ásravam*, *ásrot*, etc.); and HOFFMANN's II. **dhāīma* (= **daēmā*, *dhe*[*yā*]ma, *θείμεν*), for which we should have expected type I **dhīmā* (Av. **dīmā* or **diiāmā*, Ved. **dhī*[*yā*]ma). NARTEN (pp. 103-4) attributes the full grade of *srauuīmā* to the influence of the semantically related

¹² Indeed, "proterokinetic" paradigms in the parent language (type **péh₂-u*, gen. **ph₂-uén-s* 'fire'; cf. SCHINDLER (1975: 9 f.)) displayed precisely the opposite distribution of strong and weak stems.

verb *xšnauu-* 'enjoy, heed', which inherited a sigmatic aorist and a type II optative *xšnauuī-* (GA. 2 sg. mid.(!) *xšnəuuišā*). She does not discuss the status of *dheyāma* and *θειμεν* at all.

My own view of the aorist optatives of type I differs from NARTEN's in one crucial respect. Like her, I believe that the type I paradigm was originally hysterokinetic, with fixed zero grade of the root syllable and an ablauting mood sign. The following were some typical early PIE forms:

sg. 1	* <i>kl̥u-_iéh₁-m</i>	* <i>dhh₁-(i)_iéh₁-m</i> ;	cf. pres. opt.	* <i>h₁s-(i)_iéh₁-m</i>
2	* <i>kl̥u-_iéh₁-s</i>	* <i>dhh₁-(i)_iéh₁-s</i>		* <i>h₁s-(i)_iéh₁-s</i>
3	* <i>kl̥u-_iéh₁-t</i>	* <i>dhh₁-(i)_iéh₁-t</i>		* <i>h₁s-(i)_iéh₁-t</i>
pl. 1	* <i>kl̥u_y-ih₁-mé</i>	* <i>dhh₁-ih₁-mé</i>		* <i>h₁s-ih₁-mé</i>
2	* <i>kl̥u_y-ih₁-té</i>	* <i>dhh₁-ih₁-té</i>		* <i>h₁s-ih₁-té</i>
3	* <i>kl̥u_y-ih₁-ént</i>	* <i>dhh₁-ih₁-ént</i>		* <i>h₁s-ih₁-ént</i>

Such paradigms, however, do not seem to have been inherited directly into the daughter languages. The attested forms in Indo-Iranian and Greek are better explained, in my view, by assuming an *inner-PIE analogical substitution* of full-grade **kl̥éu-*, **dhéh₁-* for zero-grade **kl̥u_y-*, **dhh₁-*, in the 1 pl. and 2 pl. The motivation for this development can be seen from an examination of the corresponding indicatives, where zero grade was confined to the 3 pl.:

sg. 1	* <i>kl̥éu-m</i>	* <i>dhéh₁-m</i> ;	cf. impf. indic.	* <i>h₁és-m</i>
2	* <i>kl̥éu-s</i>	* <i>dhéh₁-s</i>		* <i>h₁és-s</i>
3	* <i>kl̥éu-t</i>	* <i>dhéh₁-t</i>		* <i>h₁és-t</i>
pl. 1	* <i>kl̥éu-me</i>	* <i>dhéh₁-me</i>		* <i>h₁s-mé</i>
2	* <i>kl̥éu-te</i>	* <i>dhéh₁-te</i>		* <i>h₁s-té</i>
3	* <i>kl̥u_y-ént</i>	* <i>dhh₁-ént</i>		* <i>h₁s-ént</i>

In hysterokinetic presents like **h₁(é)s-* the forms of the optative plural appeared to be derived from the corresponding forms of the indicative plural by inserting the mood sign **-ih₁-* between the root and the personal endings. In the root aorist this pattern held in the 3 pl. (**kl̥u_y-ént*, *dhh₁-ént* : **kl̥u_y-ih₁-ént*, **dhh₁-ih₁-ént*) but not in the 1 pl. or 2 pl., where the full-grade root of the indicative (**kl̥éu-me*, *-te*, **dhéh₁-me*, *-te*; cf. HOFFMANN (1968: 249 f.)) contrasted with

the zero-grade of the optative (**kl̥u_y-ih₁-mé*, *-té*, *dhh₁-ih₁-mé*, *-té*). The assymetry was repaired by a simple proportion:

1-3 pl. indic.	* <i>h₁s-mé</i> , <i>-té</i> , <i>-ént</i> :	opt.	* <i>h₁s-ih₁-mé</i> , <i>-ih₁-té</i> , <i>-ih₁-ént</i>	
:	: 3 pl. indic.	* <i>kl̥u_y-ént</i> , <i>*dhh₁-ént</i> :	opt.	* <i>kl̥u_y-ih₁-ént</i> , <i>*dhh₁-ih₁-ént</i>
:	:	1,2 pl.	* <i>kl̥éu-me</i> , <i>-te</i> , <i>*dhéh₁-me</i> , <i>-te</i> : <i>X</i> ,	

where *X* was solved as 1 pl. **kl̥éu-ih₁-me*, **dhéh₁-ih₁-me*, 2 pl. *kl̥éu-ih₁-te*, **dhéh₁-ih₁-te*.

In this way, the type I root aorist optative came to be associated with a "mixed" inflection in late PIE — an inflection fundamentally hysterokinetic, but with superficially acrostatic forms in the 1 pl. and 2 pl.¹³ The Indo-Iranian and Greek reflexes of the optative of **dheh₁-* are worth noting explicitly:

Late PIE	Indo-Iranian	Pre-Greek
* <i>dhh₁-(i)_iéh₁-m</i>	* <i>dh(i)yám</i>	* <i>θύην</i>
* <i>dhh₁-(i)_iéh₁-s</i>	* <i>dh(i)yás</i>	* <i>θύης</i>
* <i>dhh₁-(i)_iéh₁-t</i>	* <i>dh(i)yát</i>	* <i>θύη</i>
* <i>dhéh₁-ih₁-me</i>	* <i>dháīma</i>	* <i>θειμεν</i>
* <i>dhéh₁-ih₁-te</i>	* <i>dháīta</i>	* <i>θειτε</i>
* <i>dhh₁-ih₁-ént</i>	* <i>dh(i)yánt</i>	* <i>θύεν</i>

The subsequent treatment of these forms varied from language to language. The most conservative was Gathic Avestan: Ir. **dh(i)yám* and **dh(i)yát* yielded *diīqm* and *diīāt* directly, while **dháīma* and **dháīta* probably remained as (unattested) **daēmā* and **daētā*¹⁴. In Vedic Sanskrit, on the other hand, there was contamination of the two stem-forms, with *dheyā-* (trisyllabic) replacing

¹³ In the absence of any actually attested forms it is impossible to discuss the dual, which presumably patterned with the 1 pl. and 2 pl.

¹⁴ That **daēmā* and **daētā* would have been in a good position to resist analogical replacement is suggested by the survival of *zaēmā*, although the latter, as a type II form, was not necessarily subject to the same inner-paradigmatic pressures as **daēmā*. It is also possible, of course, that the actual Gathic forms were **diūāmā*, *-tā* or **dāiāmā*, *-tā*, with the same remodeling as in *jamiāmā* and *buiāmā*.

**dhiyā-* in the singular and subsequently spreading to the plural as well. (More typical roots like *śru-* simply generalized the strong stem *śrūyā-* to all positions.) The same mixing of stems — though without the extension of *-i(ǝ)η-* to the plural — took place independently in Greek, where **θί(ǝ)ην, -ης, -η, -εν* was replaced by *θείην, -ης, -η, -εν* (cf. **δί(ǝ)ην > δότην, *στί(ǝ)ην > σταιήν, *γυί(ǝ)ην > γυοίην, etc.*). All Greek root aorist optatives are of this type¹⁵.

The reconstruction of a PIE type I paradigm with both hysterokinetic (**dhh₁-(i)ǝéh₁-*, etc.) and superficially acrostatic (**dhéh₁-ih₁-*, etc.) stem variants disposes of many of the apophonic problems discussed by HOFFMANN, KELLENS and NARTEN. There remains a small residue of type II forms. NARTEN, as we have seen, sets up a type II paradigm with full grade of the root and fixed initial accent (**uén-ih₁-*, etc.) — a reconstruction which allows her to offer a single explanation for *varəzīmā*, *zaēmā*, and *vainūt*, together with the middle form *xšnauušā*. Strictly speaking, however, only *vainūt* and *xšnauušā* require special treatment. *varəzīmā* and *zaēmā*, with their full-grade vocalism, are structurally indistinguishable from the type I forms *srauuīmā* and **daēmā*; if our only information about type II came from the 1 pl., we could dispense with the assumption of two separate classes altogether. *vainūt* and *xšnauušā* have been variously interpreted. In principle, it is at least conceivable that *vainūt* is the replacement of an earlier **uan-ǝāt* (< **uǝǝ-ǝéh₁-t*), with secondary *-t-* from the 1 pl. **uán-t-ma* (< **uén-ih₁-me*); by the same token, *xšnauušā* could have acquired its vocalism from the 1 pl. **xšnauuīmā* or from the weak stem of the indicative (*xšnaoš-*). The possibility of constructing such scenarios, ad hoc and inelegant though they may be, shows that the hypothesis of a morphologically distinct type II cannot be proved from the evidence of Avestan alone.

The problem of *vainūt* and other substitutive root aorists, however, is inseparable from the history of the sigmatic aorist as a whole. We may take it as given that there was no aorist optative in **-s-ih₁-* in late PIE; the *s*-aorist based its synchronic optative directly on the verbal root. How could such a suppletion

¹⁵ The only other branch of the IE family which retains significant traces of the root aorist optative is Italic. Osc. *fuēd* [*fuēd*] 'fuerit' rests on the strong stem **bhuh_x-ǝéh₁-*; similarly, Lat. *det* presupposes an optative **dh₃-ǝéh₁-*. Special interest attaches to the modal stem **dou-t-*, seen in OLat. pres. subj. *-duim, -ts*, etc., Falisc. pres. subj. 3 sg. *perdouiad* and Umbr. impv. 3 sg. *perdouitu*, *purtuvitu* (1oX), fut. 2 sg. *purtuvies* (1X). It is tempting to regard these forms as developments of the inherited optative 1, 2 pl. **doǝmos, *doǝte* (< **déh₃-ih₁-me, *-te*), with contraction inhibited by the morpheme boundary and a hiatus-breaking **-u-* inserted between the root and the mood sign.

pattern have originated? Under one thinkable hypothesis, the "true" *s*-aorist optative in **-s-ih₁-* could simply have fallen into disuse, forcing speakers to supply the missing forms from another category, the root aorist. Types I and II would then presumably go back to a single formation, and any attempt to establish a separate ablaut pattern for type II would necessitate an unmotivated complication in our account of the protolanguage. But there are other possibilities as well. It has been suggested, for example (see below), that the "sigmatization" of the *s*-aorist indicative was a relatively late development within the PIE period. If so, a form of the type 3 sg. **prék-s-t* 'asked' could, e.g., have replaced an earlier acrostatic root aorist **prék-t*, the optative of which would have been **prék-ih₁-t*, with an ablaut pattern distinct from that of type I. Or again, the historically expected optative **prék-s-ih₁-t* could have lost its **-s-* by analogy or sound change, thus giving **prék-ih₁-t* by an entirely different route. None of these particular scenarios will be advocated here; the essential point is simply that the hypothesis of a type II **uén-ih₁-*, apophonically distinct from type I **dhh₁-(i)ǝéh₁-*/**dh(é)h₁-ih₁-*, would make excellent a priori sense under some theories of the PIE *s*-aorist, and not under others¹⁶.

My own view of the prehistory of the *s*-aorist is presented in JASANOFF (1988). I there try to show, pursuing an idea of IVANOV (1959: 30) and WATKINS (1962: 67), that the fully sigmatic *s*-aorist paradigms of Indo-Iranian, Greek, and most of the other early IE languages are a dialectal innovation, and that a more primitive state of affairs is preserved in Hittite and Tocharian. These languages confine **-s-*, at least in the active, to the 3 sg.; the other members of the paradigm add the personal endings directly to the root (cf. Hitt. 1 sg. *nēhhun* 'I turned, led', 2 sg. *nāitta*, 3 pl. *nāir* vs. 3 sg. *nāiš* < **nēih₁-s-t*; Toch. B 1 sg. *prekwa* 'I asked', 2 sg. *prekasta* (i.e., *prek-* + *-(ā)sta*), 3 pl. *prekar* vs. 3 sg. *preksa* < **prék-s-(a)t*). This is not the only point on which Hittite and Tocharian agree. The Hittite preterites in 3 sg. *-š* belong to the *hi*-conjugation, which otherwise takes endings similar to those of the PIE perfect; perfect-like endings are also characteristic of the non-sigmatic forms of the Tocharian "*s*-preterite." These resemblances, supplemented by inner-Tocharian evidence

¹⁶ The historical explanation for the association of *s*-aorist indicatives with root aorist optatives seems hardly ever to have been discussed. NARTEN (1984: 99) thinks that it may be secondary, arising "etwa durch gleichzeitiges Nebeneinander von Wurzelaorist und sigmatischem Aorist."

for *o*-grade in the *s*-less forms¹⁷, suggest that the sigmatic aorist originated in a pre-PIE root aorist of the "*h₂e*- conjugation"¹⁸:

sg. 1	*prók-h ₂ e	(*h ₂ u?) ¹⁹	pl.	*prók-me ²⁰
2	*prók-th ₂ e			*prók-(t)e ²⁰
3	*prók-e			*prék-ɾs ²¹
subj.	*prék-e/o-			
opt.	*prék-ih ₁ -			

The crucial step in the evolution of the classical *s*-aorist, I believe, was the inner-PIE replacement of the 3 sg. in *-*e* (*prók-*e*) and the subjunctive in *-*e/o*- (*prék-*e/o*) by new forms borrowed from a wholly different category — the athematic *s*-presents with "NARTEN" ablaut (type Hitt. *ganešzi* 'recognizes',

¹⁷ Such *o*-grades survive in two archaic categories: 1) the non-sigmatic middle preterite type exemplified by A 3 sg. *nakāt* 'perished' (< **nok-to*), replacing older **nók-e*; and 2) the athematic *o*-grade subjunctive Type B 1 sg. *neku* 'I will/may destroy', representing a development of the aorist indicative **nók-h₂e*.

¹⁸ See JASANOFF (1979), where it is suggested that PIE **melh₂*- 'grind' and a small number of other roots originally formed presents with **o* : **e* ablaut and endings identical with those of the perfect (cf. Lat. *molō*, Go. *malan*, Lith. *malù*, OCS *meljo*, OIr. *melid*, Hitt. *mall(a)i*. (*hi*-conj.)). Such forms, whatever their diathesis in pre-PIE, were synchronically active by the time of the breakup of the parent language. Other present classes which took the perfect endings included the type in *-*i*- (cf. Hitt. *dāi* 'puts', 3 pl. *tiyanzi*, as if < **dhéh₁-i*/**dh₁-i*)) and the reduplicated type in *-*s*- (cf. Hitt. *iššai* 'does repeatedly', 3 pl. *iššanzi* < **i₁-ih₁-s*- or **h₃i₁-h₃ih₁-s*).

¹⁹ In JASANOFF (1988: 65 f.) I posit the variant **h₂u* to account for CToch. **wa* (< **uh₂*, with laryngeal metathesis), Ved. *-au* (cf. 1 sg. perf. *tastháu* (< **o*(*h₂)-h₂u*) 'I stand') and Hitt. *-hun* (i.e., *-hu*+ *-n*; see, however, EICHNER (1988: 136⁴⁴)). A third variant **h₂*, is attested in the 1 sg. active of the thematic conjugation (cf. **bhéro-h₂* 'I carry'). The allomorphs **h₂e*, **h₂*, and **h₂u* recall the three variants of the ending of the nominative-accusative dual (cf. Gk. *πόδες* (< **h₁e*) 'two feet', *λύκω* (< **o-h₁*) 'two wolves', Ved. *vīkā*, *-au* (< **o-h₁*, **o-h₁u*) 'id.').

²⁰ Or perhaps **prék-me*, **prék-te*, as in JASANOFF (1988); but it is probably simpler to assume that the 1 pl. and 2 pl. of the *h₂e*- conjugation aorist were strong, as in other root aorists.

²¹ For the 3 pl. in *-*ɾs* and its relationship to the full-grade variant *-*ēr* cf. JASANOFF, op. cit., 71³).

Toch. A *kñasāst* 'du kennst dich aus' < **ǵnēh₃-s*-/*ǵnēh₃-s*-)²². The result was the "presigmatic" aorist paradigm indicated by Hittite and Tocharian:

sg. 1	*prók-h ₂ e	(*h ₂ u)	pl.	*prók-me
2	*prók-th ₂ e			*prók-(t)e
3	[*prék-s-t]			*prék-ɾs
subj.	[*prék-s-e/o-]			
opt.	*prék-ih ₁ -			

Most of the IE daughter languages subsequently extended the stem **prék-s-* to the remaining forms, giving rise to the "classical" *s*-aorist **prék-s-m*, **prék-s-s*, etc. Indo-Iranian was one of the branches that took part in this development, but here the process was incomplete: *-*s*- did not penetrate to the optative, which continued to be formed directly from the verbal root. Significantly, the forms which thus escaped sigmaticization were of the acrostatic type (**prék-ih₁-*), being based on the acrostatic indicative **prók-/prék-*.

The full-grade root and zero-grade suffix of *vainū*, *xšnauišā*, *varāzīmā* and *zaēmā* can thus, under this view, be taken as a direct inheritance from PIE. NARTEN's hypothesis of an acrostatic type II is in my opinion entirely correct; moreover, there is a significant body of evidence, hitherto overlooked or misinterpreted, which strongly suggests that forms of the same kind once existed in Sanskrit and Greek.

Let us pursue the above reasoning a step further. If the sigmatic aorist is in fact descended from a root aorist with perfect-like endings, it is plausible to suppose that the corresponding optative was once inflected in the same way. This suggests the following for the late PIE aorist indicative and optative of the root **u_{en}-*:

²² The reasons for the intrusion of sigmatic forms into the *h₂e*-conjugation root aorist are discussed in JASANOFF, op. cit., 63 ff. The suppletive 3 sg. in *-*s-t* was probably introduced into the paradigm to serve as the transitive counterpart to *-*e*, which had been relegated to intransitive functions in late PIE. The spread of the sigmatic subjunctive in *-*se/o-* must have been favored by the fact that roots which formed both *h₂e*-conjugation aorists and thematic presents, such as **pek[#]*- 'cook, ripen' and *dheg[#]*- 'burn', would otherwise have had identical aorist subjunctives and present indicatives.

	indicative	optative
sg. 1	*uón-h ₂ e	*uén-ih ₁ -h ₂ e
2	*uón-th ₂ e	*uén-ih ₁ -th ₂ e
3	[*uén-s-t]	*uén-ih ₁ -e
pl. 3	*uén-ŕs	*uén-ih ₁ -ŕs

In Indo-Iranian, most of these forms were lost or transformed before the separation of the two branches. The *h₂e*-conjugation endings were largely eliminated — in the indicative through the spread of the "mi-conjugation" stem *uén-s-*, and in the optative through the direct substitution of **-m*, **-s*, **-t* (cf. *vainī*), probably under the influence of the indicative, for the obsolescent **-h₂e*, **-th₂e*, **-e*. But the 3 pl. optative was treated differently. Here the sequence **-ih₁-ŕs* (> *Πr. *-(i)ŕs*) not only survived, but actually extended its sphere of usage at the expense of the type I ending **-(i)iant* < **-ih₁-ent*. In Sanskrit the replacement of **-yan* (< **-(i)iant*) by *-yur* (< **-(i)ŕs*) was complete: *-yur* was generalized to every active 3 pl. optative in the language (cf. *sahyur* (type II), *dheyur* (type I), *syur* (root present), *bhāreyur* (thematic present), etc.)²³. Avestan was more conservative, keeping *-iian* (< **-(i)iant*) as the only ending in thematic stems (cf. *YAv. baraiian* = *Gk. φέροειν*)²⁴, and retaining *-iian* (< **-(i)iant*), with analogically generalized **-iā-* alongside newer *-iāraš* (< **-(i)iārš*, likewise with analogical **-iā-*) in athematic stems (cf. *YAv. jamiiān/jamiiāraš* (type I)²⁵, *hiiāra* (root present)²⁶, *daiθiiān/daiθiiāraš* (reduplicated present), etc.). The spread of **-(i)ŕs* may have been facilitated by the survival in early Indo-Iranian of a group of *h₂e* conjugation presents, notably including the type **mólh₂-/*mélh₂- 'grind'* (cf. note 17), with optatives similar to the type II forms posited above.

²³ The scansion *-yur* (rather than **-i(y)ur*) reflects the influence of the full-grade suffix-form *-yā-*.

²⁴ The replacement of **-oih₁-ŕt* by **-oih₁-ent* in the 3 pl. optative of thematic presents and aorists seems to have been an innovation of the PIE period.

²⁵ No 3 pl. forms are attested from root aorist optatives of type II; the expected ending would have been **-ŕaš*.

²⁶ The regular form would have been **hiiāraš*; the absence of *-š* is either a mistake or due to analogy with the 3 pl. perfect in *-ara*.

This explanation of the *r*-endings of the 3 pl. optative is preferable to the standard view, as set forth, e.g., by LEUMANN (1952: 37 f.). LEUMANN attributes the *-ur* of the Sanskrit optative to the influence of 3 pl. aorist indicatives of the type *ád(h)ur*, *ásthur*, etc., which were themselves modeled on imperfects of the type *ádad(h)ur* and, ultimately, on perfects of the type *dad(h)úr*. But it is hard to see how this can be correct, since the 3 pl. in **-(i)ŕs* was clearly already part of the optative paradigm in Common Indo-Iranian, while the *-ur* of *Skt. ád(h)ur* and *ádad(h)ur* is a purely Indic innovation (cf. *Av. 3 pl. aor. dān*, impf. *dadaŕ* < **-ŕt*). An alternative possibility would be to take the *-ur* of the optative as a back-formation from the corresponding 3 pl. middles in *-ra[n]*, *-ra[ta]* (cf. *RV dadīran*, *bharerata*, etc.); the perfect indicative, where the 3 pl. active ended in *-ur* and the 3 pl. middle ended in *-re*, could have provided a model, albeit inexact, for such a development. An explanation of this kind, however, would not account for the failure of **-(i)ŕs* to penetrate to thematic stems in Avestan — a distributional peculiarity which follows naturally from the *h₂e*-conjugation theory. Nor is the origin of **-(i)ŕs* likely to have been the perfect optative itself, even though an *r*-ending would here have been etymologically justified²⁷. It is simply not credible that a category as marginal as the perfect optative could have imposed its 3 pl. ending on the optatives of the other tense systems.

In addition to serving as the point of departure for the spread of **-(i)ŕs*, the type II optatives were apparently the locus of another important post-IE innovation — the replacement of the 3 sg. root aorist optative in **-yāt* by *-yāh* (i.e., *-yās*) in Vedic Sanskrit. Forms of the type *bhūyāt*, *gamyāt* etc., though attested in the later Samhitas and, mutatis mutandis, in Iranian, are not found in the Rgveda. Their place is taken by the "precatives" *bhūyāh*, *gamyāh*, etc., which spawned a complete paradigm in *-yās-* in the later Vedic language (cf. 1 sg. *bhūyāsam* *RV X. 166. 5*, later 1 pl. *bhūyāma*, 3 pl. *bhūyāsur*, etc.). As pointed out by LEUMANN (op. cit., 41) and other scholars, the origin of the 3 sg. optative in *-yāh* is no doubt to be sought in the *s*-aorist indicative, where the pre-Vedic reduction of final consonant clusters frequently led to the apparent substitution of *-s* for *-t* in the 3 sg. (cf. 2, 3 sg. *áyāh* < **á-yā-s-s*, **-s-t* (: *yā-* 'ride, drive') vs. impf. 2 sg. *áyāh*, 3 sg. *áyāt*). This pattern was generalized to

²⁷ In fact, the evidence of Indo-Iranian and Greek (cf. *Ved. vidyāt*, *eidein*, etc.) suggests that the perfect optative took the normal active endings in PIE (**-m*, **-s*, **-t*, etc.), rather than the theoretically expected **-h₂e*, **-th₂e*, **-e*.

the optative: the distinction between the 2 sg. opt. *-yāh* and 3 sg. opt. *-yāt* was maintained in the present system, but lost in the optative of the aorist, where **-yāt* was replaced by *-yāh* < **-yās(t)*²⁸. That the influence of the *s*-aorist indicative should have been strong enough to eliminate **-yāt* from the whole of the aorist system may seem surprising, given the survival of *-yāt* in the present and the ubiquitousness of *-t* as a 3 sg. person marker. The substitution of **-s(t)* for **-t* finds its explanation, however, in the fact that the pre-Indic optative corresponding to the *s*-aorist was a distinct formal category, characterized by the endings **-īm*, **-iṣ*, **-ī* (type II, for earlier **-ih₁-h₂e*, etc.) rather than the usual **-yām*, **-yās*, **-yāt* (type I). The fundamental step in the creation of the 3 sg. precatative was the universal replacement of the aorist optative in **-ī* by **-iṣ(t)* under the influence of the corresponding *s*-aorist indicative in **-s(t)*. Only later, when the distinction between types I and II was eliminated and *-yā* was substituted for **-ī* everywhere in the active (cf. *syāma* for **simā*, *śrīyāma* for **śrāvīma*, etc.), was the paradigm **vānīm*, **vāniṣ* **vāniṣ(t)* remodeled to **vanyām*, **vanyās*, **vanyās(t)*, thus allowing the type II 3 sg. in **-yās(t)* to compete with, and eventually to supplant, the type I 3 sg. in **-yāt*²⁹.

Our hypothesis of a type II aorist optative 3 sg. in **-iṣ(t)*, later replaced by **-yās(t)*, is directly confirmed by the peculiar precatative forms 1 sg. *khyeṣam* (: *khyā-* 'catch sight of'; VS, TS, etc.); 1 sg. *geṣam*, pl. *-sma* (: *gā-* 'go'; AV, VS, TS, etc.); 1 sg. *jeṣam*, (: *ji-* 'conquer'; VS, TS), pl. *jéṣma*, (RV, VS, TS, MS, etc.); 1 sg. *jñeṣam*, pl. *-sma* (: *jñā-*; AV, etc.); 1 pl. *deṣma* (: *dā-*; VS);

²⁸ It is of course immaterial whether we think of the analogy as operating at a time when the indicative endings were still 2 sg. **-s(-s)* and 3 sg. **-s-t*, or whether we date the introduction of **-s-* into the optative to a period when the 2 sg. and 3 sg. indicative had already merged as **-s*. In the former case, the result of the analogy would have been the establishment of an optative 3 sg. in **-s-t*, from which the creation of a full-blown precatative in 1 sg. *-s-am*, 1 pl. *-s-ma*, etc. would have been particularly simple.

²⁹ The original type II 3 sg. in **-iṣ(t)* also engendered a 3 sg. middle in *-iṣta* < **-iṣta* and a 2 sg. middle in *-iṣthāh*. The new precatative endings spread at the expense of type I *-ta* and *-thāh*; the Rigveda has *arita* and *vurita* beside the root aorists 3 sg. *ārita* 'went' and 3 sg. *āvrita* 'chose', but also *mucṣta* and *padīṣta* beside the root aorists 2 pl. *āmugdhvam* 'put on (clothes)' and 3 pl. *apadran* 'fell'. In the *s-*, *iṣ-* and *siṣ-*aorists, which formed the original locus of the middle precatative, the elimination of *-ta* and *-thāh* was practically universal (cf. 2 sg. *mamṣiṣthāh*, 3 sg. *mamṣiṣta*, *janīṣiṣta*, *vanīṣiṣta* etc.; the unique 3 sg. *bhaksīta* (: *bhaj-* 'divide'; SV) is correctly explained as secondary by NARTEN (1964: 180)). The sigmatic stem of *mamṣiṣta*, etc. (for expected type II **manīṣta*) is an obvious innovation.

1 sg. *yesam* (: *yā-*; RV); 1 sg. *seṣam* (: "sā-" 'gain'; VS, MS, etc.); 1 sg. *stheṣam*, 3 pl. *-sur* (: *sthā-*; AV, VS, MS). These forms are discussed by HOFFMANN (1967), who regards *khyeṣam* as the oldest member of the class. In HOFFMANN's view (p. 31), *khyeṣam* is simply a "precativization" of *khyéyam*, the optative associated with the well-attested thematic aorist *khyá-*. The 3 pl. corresponding to **khyéyam* was **khyésur*, precativized (i.e., sigmatized) from *khyéyur*; according to HOFFMANN, the coexistence of **khyésur* and *khyéyur* led to the creation of precativized **jñésur*, **désur*, **sthésur*, etc. beside the regular optatives **jñéyur*, **déyur*, **sthéyur*. From here the sequence **-éṣ-* was extended to the first person, giving *-eṣam* and *-eṣma*; in similar fashion, *jeṣam* and *jeṣma* were built to **jeṣur*, the precativized form of a 3 pl. opt. **jéyur* < **jay-iy-ur*, with radical full grade as in *dheyur* < **dha-iyur* (p. 34). This theory is rightly criticized by COWGILL (1969: 28 ff.), who points out the unacceptability, on several grounds, of assuming an early precativization of **khyé-* to **khyé-s-*. COWGILL himself proposes to derive the 3 pl. in **-éṣur* from a direct precativization of the 3 pl. optative in **-eyur*; it is not clear, however, why this process would not rather have yielded forms of the type **jñeyásur*, **deyásur* and **stheyásur* (cf. 3 sg. **jñeyāh*, **deyāh*, **stheyāh*). In more general terms, both HOFFMANN's and COWGILL's theories suffer from the disadvantage of having to explain the relatively well-established forms in *-eṣam* and *-éṣma* on the basis of the barely attested 3 pl. in *-eṣur*, which occurs only once in the Atharvaveda (*stheṣur* XVI. 4. 7).

In fact, the precatives in *-eṣ-* can be easily explained in the context of the framework proposed above. The only two forms of this type that occur in the Rigveda are *yesam* and *jeṣma*, built to the roots *yā-* and *ji-*, respectively. It is surely no accident that of the eight roots that make *-eṣ-*precatives (*khyā-*, *gā-*, *ji-*, *jñā-*, *dā-*, *yā-*, "sā-", *sthā-*), *yā-* and *ji-* are precisely the two that also form well-attested *s*-aorists (cf. 3 sg. *áyāh*, *ájaiḥ*)³⁰. The regular Indo-Iranian optatives of *yā-* and *ji-* would thus have been **yái-* and **jáii-* (type II; cf. GAV. *zaēmā-* < **zhái-*), continuing PIE **iéh₂-ih₁-* and **g[#]éi-ih₁-*. In Indic the expected 3 sg. forms **yáii* and **jáii* underwent precativization to **yáiiṣ(t)* and **jáiiṣ(t)*, whence Vedic **yéḥ* and **jéḥ*. No 3 sg. aorist optatives are in fact attested from these roots in the Rigveda; it is not unlikely that the predicted **yéḥ* and **jéḥ* would eventually have been remade to **yeyāh* and **jeyāh* on the

³⁰ A feebly attested *s*-aorist is also made, beginning in the Atharvaveda, from *jñā-*; cf. NARTEN (1964: 122).

model of the dominant type *dheyām*, *peyāh*, etc.³¹. Before their disappearance, however, these short forms — or perhaps rather their predecessors **jáišt* and **jáištī* — triggered the creation of the first person precatives *yesam*, **yésma* (**yáišam* **-šma*) and **jésam*, *jésma* (**jáiśam*, **-šma*). The other precatives in *-es-* were built by analogy in historical times: just as *yā-* made a 1 sg. *yešam* and a 1 pl. **yésam*, the roots *jñā-*, *dā-*, *sthā-*, etc. were equipped with new forms in *-ešam* and *-ešma*³². The 3 pl. *sthesur* is best regarded as a nonce formation on the basis of *sthesam*, **-šma*.

Interestingly, the type II root aorist optative has also left a distinctive trace in Greek. This is by no means self-evident, since the optative of the *s*-aorist in Greek, while problematic in many respects, is fully sigmatic. We find, as noted earlier, two main formal types:

- a) the normal type in *-σαι-* (*δείξαιμι*, *-αις*, *-αι*, *-αιμεν*, *-αιτε*, *-αιεν*; mid. *δείξάιμην*, etc.), obviously built to the "alphathematic" indicative stem *δείξα-* in imitation of the pattern indic. $\check{\epsilon}(\text{f})\acute{\iota}\delta\omicron\nu$, *-ες* : opt. (*φ*)*ἰδοίμι*, *οις*; and
- b) the defective "Aeolic" type in *-σει-* with alphathematic inflection, represented by 2 sg. *δείξειαις*, 3 sg. *δείξειε* and 3 pl. *δείξειαν*. The late grammarian Choeroboscus claims to record a 1 sg. in *-σεια*, 1 pl. in *-σειμεν* and 2 pl. in *-σειτε*, on which see FORBES (1958: 165 ff.).

The origin of the Aeolic type, which is clearly the more archaic of the two formations, is obscure; summaries of earlier proposals, none of them compelling, are given by SCHWYZER (1938: 796 f.) and RIX (1976: 233). Important light on the problem is shed by the Cretan 3 pl. opt. *φερκσιεν* (Gortyn), and especially by the remarkable 3 sg. opt. forms *κοσμησιε* and *δικακσιε* (Dreus), the final short vowel of which is assured³³. The presence of *-σιε* rather than

³¹ Compare HOFFMANN (1967: 474) and COWGILL (1969: 38⁶). Rigvedic 2 sg. *jeh* (VI. 4. 4) is less likely to be a true optative **jáišt* < *g^héi-ih₁-s* than an injunctive or an apocopated imperative in *-si* (cf. NARTEN (1964: 119 f.)).

³² The 1 pl. probably played a pivotal role in the extension process. Both type I and type II inherited 1 pl. optatives in *-ema*; when **yéma* (type II) acquired the precativized byform **yésma*, it was only natural for **déma*, **sthéma*, etc. to undergo precativization to *desma*, **sthésma*.

³³ A doubtful addition is the Gortynian form *διαλυσσαν* (GDI 5004, 9), which, if a verb

-σειε in Cretan suggests that here, as elsewhere in the Greek optative, the diphthong *-ei-* is simply the replacement of earlier *-i-* (cf. aor. opt. 3 sg. *θείη* for **θίη*, as discussed above; note also pres. opt. *ιείη* (T 205) for **ίη* (: *εἶμι* 'I go') and perf. opt. *εἰδέη* for **(f)ιδίη* or **(f)ίξη* (: *(f)οἶδα* 'I know'))³⁴. To account for the Aeolic optative, we must first explain the structure and origin of the type *κοσμησιε*, and then provide a mechanism for the replacement of *-σιε* and *-σιεν* by *-σειε* and *-σειαν*.

Since the inherited optative of the *s*-aorist was the root aorist optative of type II, it will be useful to consider, in a priori terms, how this formation would have been treated in Greek. The type II optative, as we have already seen, was originally characterized by the terminations of the *h₂e*-conjugation, with a 1 sg. in **-ih₁-h₂e*, 2 sg. in **-ih₁-ih₂e*, 3 sg. in **-ih₁-e* and 3 pl. in **-ih₁-rs*. Of these sequences, **-ih₁-h₂e* and **-ih₁-e* would have yielded pre-Greek **-uα* and **-uε*, respectively. The 2 sg. in **-ih₁-ih₂e* would have given **-iθα* by regular sound change; but since a 1 sg. in *-α* and a 3 sg. in *-ε* normally imply a 2 sg. in *-ας* in Greek (cf. the perfect and *s*-aorist indicative), it is virtually certain that **-iθα* would eventually have been remade to **-uας*. The 3 pl. in **-ih₁-rs* would likewise have been subject to morphological renewal. Since Greek otherwise replaced its *r*-endings in the 3 pl. with *nt*-endings, both in the perfect (Common Gk. **-ατι* < **-ῥτι* for **-rs*/**-er*) and the middle (*-ντο* for **-ρο*), the likeliest successor to **-ih₁-rs* would have been **-uεν* (as if < **-ih₁-ent*), with the same ending as in *θείεν* (older **θίuεν*; cf. above), *φέροιεν* and *ἴδοιεν*.

We may accordingly envisage the following paradigm for the optative of the *s*-aorist at an early stage of pre-Greek³⁵:

at all, has apparently substituted *-αν* for *-εν*.

³⁴ It is not, of course, meant to imply that these forms are of identical origin. The *-ei-* of *θείη* is the result of inner-paradigmatic leveling; that of *ιείη* reflects the influence of *ιείη* (: *ἵημι* 'I throw'); that of *εἰδέη* (cf. pluperfect **ἤφειδῆ*, *ἤδῆ* 'knew') is linked, at least synchronically, to the *-ei-* (< **-eh₁-ih₁-?*) of the optative type *φαναίη* (cf. aorist passive indic. *ἐφάνη* 'appeared'). The essential point is simply that the *-ei-* of *-σει-* need not be original, and is indeed not likely to be.

³⁵ The paradigms that follow are merely schematic; no attempt has been made to take account of the chronology of such important, but here irrelevant, changes as the establishment of *-μεν* in the 1 pl., the elimination of lengthened grade in the indicative, or the replacement of the 3 sg. indicative in **-ς* (< **-st*) by *-σε*. My interpretation of the optatives in *-σιε* and *-σειε* owes much to a 1989 discussion with M. PETERS, whose stimulating suggestions are gratefully acknowledged.

sg. 1	*δείκμα	cf. indic.	*ἔδειξα	subj.	*δείξω
2	*δείκμας		*ἔδειξας		*δείξεις
3	*δείκμε		*ἔδειξε		*δείξει
pl. 1	*δείκμεν		*ἔδειξ(α)μεν		*δείσομεν
2	*δείκτε		*ἔδειξ(α)τε		*δείξετε
3	*δείκων		*ἔδειξαν		*δείξοντι

The optative at this period still retained the inherited peculiarity of being built directly to the root rather than to the sigmatic stem of the indicative and subjunctive. This feature was preserved in Indo-Iranian, but in the less "root-centered" verbal system of Greek its elimination was inevitable. The change, when it took place, was very simple: *δείκ- in the optative was mechanically replaced by *δείξ-, with no alteration in the form of the endings and mood sign. *δείκμα thus became *δείξμα, and the third person forms in *-με and *-ων were remade to *-με and *-μεν, the immediate antecedents of Cretan -σιε and -σιεν.

To explain the dialectal replacement of *δείξμε, etc. by δείξειε, one further change must be posited for the Common Greek period. We have seen in our discussion of type I (p. 107) that verbs like θη- 'put' originally formed root aorist optatives with full grade of the root in the 1 pl. and 2 pl. (pre-Gk. *θειμεν *θειτε < *dhéh₁-ih₁-) and zero grade elsewhere (sg. *θίην, *θίης, *θίη (< *dhh₁-(i)jéh₁-), 3 pl. *θίεν (< *dhh₁-ih₁-). It would seem simplest to assume — and I would like to suggest here — that the plural paradigm *θειμεν, *θειτε, *θίεν triggered an analogical change by which *-ει- was substituted for *-ι- in the optative plural of the s-aorist. The proportion was straightforward:

*θίεν : *θειμεν, *θειτε :: *δείξμεν : X,

where X was solved as *δείξμεν, *δείξειτε. The result was the paradigm reconstructible for Late Common Greek:

sg. I	1	*δείξμα	pl.	*δείξμεν
	2	*δείξμας		*δείξειτε
	3	*δείξμε		*δείξμεν

From here the development of the attested forms was very simple. Those dialects which, like Attic-Ionic, created a "classical" Aeolic optative generalized the *-ει- of the 1 pl. and 2 pl. to the other persons and numbers, thus generating a 1 sg. *δείξεια, 2 sg. δείξειας, 3 sg. δείξειε and 3 pl. *δείξειεν (cf. the change of *θίην, etc. to *θείην, etc.). The 3 pl. was subsequently remade to the attested δείξειαν under the influence of the 3 pl. indicative ἔδειξαν. The latter change was probably assisted, if not actually induced, by the partial overlap of the original 3 pl. *δείξειεν with the 3 sg. δείξειε, which had the form δείξειεν when suffixed by movable -ν³⁶.

The Aeolic optative was ultimately supplanted by the more transparent optative in -αι-, another creation of the Common Greek period. We have no direct evidence for the locus of this formation, but the most obvious place to look is the paradigm of the middle. Here the inherited forms, after sigmaticization, would have been *δείξιμᾶν, *δείξιθο, etc., and there would have been no inherited *θειμᾶν, *θειθο, etc. to trigger the replacement of *-ι- by *-ει-, as happened in the 1 pl. and 2 pl. active. The elimination of *-ι- was therefore accomplished differently — namely, by forming an optative *δείξαιμᾶν from the indicative *ἔδειξάμᾶν on the model of the optative of the thematic aorist (cf. *φιδόιμᾶν : indic. *ἔφιδόμᾶν). Later, in the dialectal period, the middle optative in -σαι induced the creation of a back-formed active, the "normal" s-aorist optative δείξαίμι, δείξαις, etc. In the dialects known to us, the forms in -αι- completely supplanted their Aeolic counterparts in the 1 sg., 1 pl. and 2 pl., where the change to the new type simply entailed the substitution of one diphthong for another (*δείξεια → *δείξαια (→ -αίμι), *δείξειμεν → δείξαιμεν, *δείξειτε → *δείξαιτε). The 2 sg., 3 sg. and 3 pl., with their distinctive alphathematic endings -σαις, -σαιε and -σαιαν, proved more resistant to replacement, but eventually gave way to the type in -αι- within the historical period³⁷.

³⁶ It is to be noted that prior to the replacement of *-σειεν by -σαιαν, the optative of the s-aorist was the only category in Common Greek where the 3 sg. and 3 pl. differed simply in the presence vs. absence of -ν.

³⁷ Contamination of the two types can be seen in the Arcadian dialect form διακωλυσει, with retention of -ει- but loss of alphathematic inflection, and in the Elean form αδεαλτωχαιε, with retention of alphathematic inflection but substitution of -αι- for -ει-.

Thus Greek, no less than Indo-Iranian, preserves clear remnants of the inherited distinction between types I and II. It may be useful to compare and contrast the developments posited for the two branches.

Type I, properly associated with active root aorists of the classically reconstructed type, originally added the ablauting mood sign $*-iéh_1-/*-ih_1-$ to the zero-grade form of the root. Later, but still within the parent language, the root vocalism of the 1 pl. and 2 pl. was analogically strengthened from zero grade to full grade, following the pattern of the indicative (cf. 1 pl. $*dhéh_1-ih_1-me$, $*kléuih_1-me$, (= GAv. $srauuitā$), etc.). In roots of the "long-vowel" type, both Vedic Sanskrit and Greek generalized the full grade of the 1 pl. and 2 pl. to the rest of the paradigm, whence Ved. $dheyām$, $dheyāh$, $dheyāh$, $dheyūr$ and Gk. $θείην$, $θείης$, $θείη$, $θείεν$. That this last step was a post-IE innovation is shown by GAv. $diīam$, $diīat$, with preserved zero grade.

Type II, properly associated with acrostatic h_2e -conjugation aorists which were later sigmatized, added the invariant mood sign $*-ih_2-$ and the endings $*-h_2e$, $*-ih_2e$, etc. to the e -grade of the root. In Indo-Iranian the endings of the $*h_2e$ -series, apart from the 3 pl. in $*(i)rs$ (> Ved. $-(y)ūr$, Av. $-(iā)raš$), were replaced by those of the mi -series — a state of affairs directly attested in YAv. 3 sg. $vaintī$ (as if < $*uén-ih_1-t$). Vedic Sanskrit went a step further, replacing the 3 sg. opt. in $*-ī$ by $*-īš(t)$ under the influence of the corresponding indicative in $*-s(t)$. In a handful of forms, $*-īš(t)$ eventually gave rise to the precative type in $-eš-$ ($yesam$, $jésma$, etc.); elsewhere, with the general replacement of $*-ī$ by $-yā-$ throughout the active, it yielded the aorist optative 3 sg. in $-yāh$ and the normal precative in $-yās-$. In Greek the treatment of type II was very different. Here, except for the change of 3 pl. $*(i)rs$ to $*(i)ent$ (> $-(i)εν$), the h_2e -conjugation endings were mostly retained. The fundamental innovation of Greek was the introduction of $-σ-$ into the optative from the indicative and subjunctive ($*δείκμῃ$ > $*δείξμῃ$; cf. $κοσμησιε$), followed by the analogical replacement of $-(σ)ι-$ by $-(σ)ει-$ in the 1 pl. and 2 pl. The spread of $-σει-$ from the new forms in $-σειμεν$ and $-σειτε$ to the rest of the active, like the spread of the diphthong $-αι-$ to the active from its probable locus in the middle, was a development proper to the history of the individual Greek dialects. The divergent treatments of type II can be summarized in tabular form:

	PIE	Ir.	Av.	pre-Ved.	Ved.	Gk
3. sg. indic.	Root- <i>st</i>	- <i>s-t</i>	- <i>s-t</i>	- <i>s(-t)</i>	(- <i>h</i>)	- <i>σ-ε</i>
3. sg. opt.	Root- <i>ih₁-e</i>	- <i>ī-t</i>	- <i>ī-t</i>	- <i>ī-š(-t)</i>	- <i>yā-h</i>	- <i>σ-ι-ε</i> (> $-σ-ει-ε$)

The "optative of the s -aorist" had three notable peculiarities in PIE: it lacked the $*-s-$ of the s -aorist subjunctive and 3 sg. indicative; it showed persistent zero grade of the optative suffix, even in the active singular; and it took the h_2e -conjugation endings rather than the normal endings of the mi -series. The oldest Indo-Iranian, represented by Avestan, retained the first two features but not the third; the oldest Greek, represented by Cretan $κοσμησιε$ and $φερκσιεν$, retained the second and third but not the first. The more innovative dialects of each branch simplified further. Vedic Sanskrit introduced the $*-s-$ of the s -aorist indicative into the 3 sg. optative and replaced $*-ī-$ by $-yā-$; Attic-Ionic Greek, after a period of experimentation with the alphathematic "Aeolic" optative in $-σει-$, finally abandoned it for the regularly inflected type in $-σαι-$. As so often proves to be the case in historical morphology, the best attested languages and dialects of each group were by no means the most conservative.

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**Griechisch ἀφύη "Bratfischchen",
 ved. ábhva- "Uding", myk. Ortsname a-phu-**

Das neutrale ved. Substantiv *ábhva-* "Uding, Unwesen, unheimliches Wesen, Spuk, Blendwerk"¹ ist seit dem RV belegt, vgl. u. a. I 63,1 mit *vísivā ... ábhvā* "alles Gewaltige (selbst die festen Berge)"², I 24,6 mit *vātasya ... ábhvam* (es handelt sich um die Gewalt des Windes) oder I 140,5 mit *kr̥ṣṇám ábhvam* (es handelt sich um den schwarzen Feuerrauch von Agni). Es stellt ein Kompositum dar mit negierendem **ñ-* im Vorderglied und Wurzel **b^heuH₂-/*b^huH₂-* "werden" im Hinterglied. Bedeutung: "keinen Wuchs besitzend" bzw. "einen Unwuchs habend"³. Die im Ved. allein belegte Zweisilbigkeit weist auf eine vor-einzelsprachliche Grundform **ñ-b^hu-o-* mit bereits uridg. Schwund des Laryngals wie in *νεογενός* (seit den hom. Hymnen) "neugeboren" mit Hinterglied *-gno- < *g'nH₁-o-*⁴.

Das feminine griech. Substantiv *ἀφύη*, meist pluralisch *ἀφύαι*, oft in kollektivem Sinn "small-fry, like our Whitebait, including the young of various fishes"⁵ ist seit Epicharm (vgl. die Frgm. 60, 89, 124 KAIBEL) und Aristophanes (vgl. u. a. Ach. 640 mit *ἀφύων τιμήν*) bezeugt. Zu *ἀφύαι* weitergebildet ist

¹So W. NEISSER, Zum Wörterbuch des Rgveda I (1924) 74f. und danach M. MAYRHOFER, EWAia I/2 (1987) 94.

²So K. HOFFMANN, Injunktiv (1967) 181.

³Zur Funktion der Negation in Beispielen wie dt. Unmenge, Unsumme vgl. HJ. SEILER, Studia Linguistica 6 (1952) 90 = Sprache und Sprachen, Gesammelte Aufsätze (1977) 19.

⁴Vgl. F.B.J. KUIPER, Lingua 11 (1962) 228f. und M. MAYRHOFER, Idg. Grammatik I/2 (1986) 140. Das abweichend akzentuierte atharvaved. *abhvā-* ist nach KUIPER a. a. O. nicht die Folge eines älteren **abhúa-*, sondern der Fortsetzer des rigved. *ábhva-* mit sekundärer Akzentverlagerung. Zuletzt zu *ábhva-* M. BENEDETTI, I composti radicali latini (1988) 51 mit weiterer Literatur in Anm. 149 und 150.

⁵Vgl. die ausführliche Kommentierung mit den Testimonien bei D'A.W. THOMPSON, A Glossary of Greek Fishes (1947) 21-23.