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$H_2o$  AND  $oH_2$

1. Since the early days of laryngeal theory there has been disagreement about the question whether a PIE  $*H_2$  merged with  $*H_1$  and  $*H_3$  in the neighbourhood of  $*o$  (e.g., SAUSSURE, KURYLOWICZ, COWGILL, BEEKES) or coloured a contiguous  $*o$  to  $*a$  (e.g., BENVENISTE, KURYLOWICZ, LEJEUNE, LINDEMAN). In his review of Beekes' dissertation (*Lingua* 26, 1971, 181 - 198), RUIJGH lists the following arguments in favour of the latter view:

(1) Perfect  $\acute{\pi}\acute{\epsilon}\pi\eta\gamma\alpha < \acute{\pi}\acute{\epsilon}\pi\bar{\alpha}\gamma\alpha$ ,  $\lambda\acute{\epsilon}\lambda\eta\theta\alpha < \lambda\acute{\epsilon}\lambda\bar{\alpha}\theta\alpha$  cf.  $\epsilon\rho\rho\omega\gamma\alpha$ ,  $\pi\acute{\epsilon}\pi\omicron\iota\theta\alpha$ . These forms can hardly be explained otherwise than by assuming that  $\bar{a}$ - developed phonetically from  $*-oH_2-$ . They provide a model for the analogical introduction of the present tense vocalism in the perfect: "il est facile de rendre compte de formes telles que  $\kappa\acute{\epsilon}\kappa\epsilon\upsilon\theta\alpha$  (:  $\kappa\acute{\epsilon}\upsilon\theta\omega$  'cacher') à partir du type  $\lambda\acute{\epsilon}\lambda\bar{\alpha}\theta\alpha$  (:  $\lambda\bar{\alpha}\theta\omega$  'être caché'); noter la parenté sémantique entre les deux verbes" (p. 190).

(2) Compounds  $\acute{\iota}\pi\pi\bar{\alpha}\mu\omicron\lambda\gamma\acute{o}\varsigma < *-o-H_2\mu\omicron\lambda\gamma\acute{o}-$ ,  $\sigma\tau\omicron\alpha\tau\bar{\alpha}\gamma\acute{o}\varsigma < *-o-H_2\sigma\gamma\acute{o}-$ . This phonetic development created the model for the analogical introduction of the long vowel in such forms as  $\acute{\epsilon}\pi\eta\mu\omicron\iota\beta\acute{o}\varsigma < \acute{\epsilon}\pi\bar{\alpha}\mu\omicron\iota\beta\acute{o}\varsigma$  next to phonetically regular  $\acute{\epsilon}\pi\acute{\alpha}\mu\omicron\iota\beta\acute{o}\varsigma$ .

(3) 1st sg. ending  $-\mu\alpha\iota$  next to 2nd sg.  $-\sigma\omicron\iota$  and 3rd sg.  $-\tau\omicron\iota$ . I think that we have to start from  $*(m)ai$ ,  $*(s)toi$ ,  $*(t)oi$ . The problem is that  $*-ai$  does not necessarily continue  $*-H_2oi$ , though this is a reasonable reconstruction.

(4) Expected  $o$ -grade in  $\acute{\alpha}\gamma\acute{o}\varsigma$ ,  $\acute{\alpha}\nu\epsilon\mu\omicron\varsigma$ ,  $\acute{\alpha}\rho\iota\theta\mu\acute{o}\varsigma$ ,  $\phi\acute{\eta}\mu\eta < \phi\bar{\alpha}\mu\bar{\alpha}$ , cf.  $\tau\rho\omicron\phi\acute{o}\varsigma$ ,  $\pi\acute{o}\tau\mu\acute{o}\varsigma$ ,  $\pi\omicron\rho\theta\mu\acute{o}\varsigma$ ,  $\lambda\acute{o}\chi\mu\eta$ . As for  $\acute{\alpha}\nu\epsilon\mu\omicron\varsigma$ , Lat. *animus*, I am inclined to disagree both with Ruijgh's  $*H_2onH_1mos$  and with Beekes'  $*H_2enH_1mos$  and to posit  $*H_2nH_1emos$ , cf.  $\kappa\acute{\alpha}\lambda\alpha\mu\omicron\varsigma < *k\bar{a}H_2emos$  and  $\nu\eta\nu\epsilon\mu\acute{\iota}\eta < *nH_2nH_1em-$ . Arm. *holm* is probably of non-IE origin. In  $\acute{\alpha}\rho\iota\theta\mu\acute{o}\varsigma$  we may assume zero grade, as Ruijgh remarks himself, cf. OHG, ON, OIr, *rīm*. I think that the  $o$ -grade in  $\acute{\alpha}\gamma\acute{o}\varsigma$  and  $\phi\acute{\eta}\mu\eta$  is hardly open to doubt.

2. BEEKES has returned to the matter in a separate article (*Die Sprache* 18, 1972, 117 - 131), where he regards the following cases as certain:

- (1)  $\beta\omega\mu\acute{o}\varsigma$ , cf.  $\epsilon\beta\eta\nu$ .
- (2)  $\phi\omega\eta\acute{\eta}$ , cf.  $\phi\eta\mu\acute{\iota}$ .
- (3)  $\pi\omicron\iota\mu\acute{\eta}\nu$ ,  $\pi\acute{\omega}\nu$ , cf. Lat. *pāscō*.
- (4)  $\theta\acute{\omega}\xi\alpha\iota$ , cf.  $\theta\acute{\eta}\gamma\omega$ .
- (5)  $\pi\acute{\tau}\acute{\omega}\sigma\sigma\omega$ , cf.  $\pi\acute{\tau}\acute{\eta}\sigma\sigma\omega$ .
- (6)  $\delta\gamma\kappa\omicron\varsigma$ , cf.  $\acute{\alpha}\gamma\kappa\acute{\alpha}\lambda\eta$ ,  $\acute{\alpha}\gamma\kappa\acute{\omega}\nu$ .
- (7)  $\delta\kappa\rho\iota\varsigma$ , cf.  $\acute{\alpha}\kappa\rho\omicron\varsigma$ .
- (8)  $\omicron\iota\omega\acute{n}\omicron\varsigma$ , cf. Lat. *avis*.

(9) οὔς, cf. Lat. *auris*.

(10) Skt. *áyu*, cf. αἰεί.

To these we may add ὄγμος (cf. ἄγω), ὄναρ (PIE  $*H_2onr$ ,  $*H_2ner$ -), ἀγωγή ἀκωκή (cf. ἔδωδη, ὀπωπή <  $*HC_0HC$ -). In view of the examples where  $*H_2$  colours a neighbouring  $*o$  to  $*a$ , Ruijgh suggests: "Il vaut donc mieux expliquer les cas isolés de mots tels que βω-μός, φω-νή, ὄγ-μος comme résultat d'une apophonie plus récente, qui n'a pas réussi à pénétrer plus profondément dans le système de la morphologie grecque". Here I agree with Beekes: "It is not probable that isolated cases are due to a recent reshaping" and "for some good cases such an analogical secondary ablaut cannot possibly be taken into consideration" (p. 120). Beekes' examples appear to belong to an older layer.

3. Since both points of view rest upon considerable evidence, neither can be refuted: they must be integrated into a single consistent theory. I agree with Ruijgh that  $*H_2$  coloured a contiguous  $*o$  to  $*a$  in Greek. However, I agree with Beekes that the relevant instances do not date back to the Indo-European proto-language. The simplest assumption is that the opposition between the laryngeals was neutralized in the neighbourhood of PIE  $*o$ , where they merged into  $*H_3$ , and that  $*H_2$  was restored in certain productive categories in Proto-Greek. Thus, we have ἄγός <  $*H_2ogós$ , φήμη <  $*bhoH_2meH_2$ , βέβηκα < βέβᾱκα <  $*-g^u-oH_2$ - (cf. δέδοικα) on the analogy of ἄγω <  $*H_2eg$ -, φημί <  $*bheH_2$ -, βίβημι <  $*-g^u-eH_2$ - next to ὄγμος <  $*H_3og$ - <  $*H_2og$ -, ἀγωγή, φωνή, βωμός <  $*-oH_3$ - <  $*-oH_2$ -. The analogical development must be dated before the loss of the laryngeals because the latter eliminated the motivation for it. Semantically, the restoration of  $*H_2$  in φήμη 'saying' and the preservation of the old ablaut in φωνή 'voice' is quite acceptable. The *a* in πάρος <  $*prH_2ós$  (Skt. *puráh*) was probably taken from πάρα after the loss of the laryngeals. The original reflex was preserved in Aeolic τόμοντες <  $*imH_1ontes$ . The timbre neutralization of the laryngeals in the neighbourhood of  $*o$  has its analogue in Shuswap, which offers the closest typological parallel to the PIE laryngeals. In this language, all consonants which are members of pairs exhibiting the rounding-correlation are rounded before and after the rounded vowel (cf. A. H. KUIPERS, *The Shuswap Language*, The Hague 1974, p. 22). As in Shuswap, the opposition between  $*H_3e$ - and  $*H_3o$ - was apparently not neutralized in Proto-Indo-European: initial  $*H_2$  and  $*H_3$  were preserved as *h* before  $*e$  but lost before  $*o$  in Armenian, while  $*H_1$  was always lost before a vowel, e.g. *hot* <  $*H_3ed$ - (original *s*-stem, cf. Lat. *odor*), *hoviw* <  $*H_3eui-peH_2$ - (cf. Lat. *ovis*, *pāstor*), but *orb*, *orjik<sup>c</sup>*, *or<sup>k</sup>*, *ost* (cf. ὀρφανός, ὄρχις, ὄρρος, ὄζος, OHG *ars*, *ast*). There is zero grade in *oskr* <  $*H_3stuer$ - (cf. ὀστέον). For ὦμός, Arm. *hum*, Skt. *āmáh* I would suggest PIE  $*H_3eH_3mós$ , Lat. *amārus* <  $*H_2H_3m$ -, OIr. *om* <  $*H_2H_3e|om$ -.