Stang's Law and the Indo-European word for "cow"

Abstract.

The present article investigates the etymology of the Indo-European word for "cow" and looks at two types of reconstruction, with and without laryngeal: **g^wous* and **g^weh₃us* (suggested by Kuryłowicz in 1927) or **g^wh₃eus* (as already suggested by de Saussure in 1878). By assessing the instances where Stang's Law operated and failed to operate, we find that the correct reconstruction is **g^wous*. The accusative singular of the word "cow" in Doric and Homeric Greek, Sanskrit, Sabellic and the Greek ἐκατόμβη are additional evidence in favour of this reconstruction. The article also looks at two possible arguments against that reconstruction (the short vowel *a* in the oblique cases and the disyllabic scansion of the first syllable in Vedic poetry): an ablaut type **nok^wts*, **nek^wts* can account for the short *a* in the Indo-Iranian weak cases, and the absence of a disyllabic scansion in Avestan proves that the Vedic metre is the fruit of a poetic licence. Consequently, we see no reason why **g^wous* could not be kept.*

1. *Stang's Law.*

Stang's Law (henceforth quoted as "the Law") posits that sequences *VHm#* and *VR_{+lab}m#* were not treated as *VHm̥* or *VRm̥* but became *V:m*,¹ and that *VHms#* and *VRms#* did not become *VHm̥s#* or *VRm̥s#*, but became *V:ns#* and eventually *V:s#* (Stang 1965:295, and

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¹ We use the following signs: V stands for any vowel, H for any laryngeal, R for any resonant (m, n, l, r, i, u), N for any nasal and C for any consonant. The discussion whether or not the resonant *i* was subject to Stang's Law (as Haug 2000 argued for by pointing at the accusative plural of the *i* stem nouns) cannot be addressed here, but as Sergio Neri points out, the fact that the Greek words in *oi* do not have an accusative in *ōn*, indicates that the resonant *i* did not undergo Stang's Law. We will come back to that in De Decker *ftc*. Latin is ambiguous as *fīdem* can be from PIE **b^heid^hēm* < **b^heid^hemm* < **b^heid^heim* or from **b^heid^heiem* < **b^heid^heim̥*, but Sanskrit *sakhāyam* eludes the effects of Stang's Law.

also Schmalstieg 1973:114 and Schindler 1973).² We quote five examples (three are quoted from Meier-Brügger 2001:98–99; four are from the nominal flexion, the last one is an example from the verbal flexion) to illustrate the Law, two with a semivowel *u*, one with a nasal and two with a laryngeal.

- Early Indo-European **dieum* becomes **diemm* and eventually (late Indo-European) **diēm*. This form is the basis for Sanskrit *dyām*, Greek Ζῆν and Latin *diem* (the shortening of the vowel before the *m* only occurred in Proto-Latin and not in Proto-Italic and is therefore irrelevant in this discussion).
- The accusative of **dʰegʰoms* displays a similar evolution: starting from a form **dʰegʰomm* the form eventually becomes **dʰegʰōm*.

This form can still be seen in the Sanskrit *kṣām*, which generalised the zero grade from the weak cases, and also in Hittite *tekan* (Johnsen 2005:131–132).³

- The Proto-Greek (or even Proto-Indo-European?) form **gʷasilewm* evolves into **gʷasilemm* and finally becomes **gʷasilēm*, yielding the form βασιλην, which can be found in Arcado-Cyprian Greek. Based on this accusative, Arcado-Cyprian created nominatives in ης, where other dialects had forms in εὐς.⁴

² That the accusative plural *V:ns* became *V:s* in Indo-European still was already observed by Brugmann and Hirt. We would like to stress that we are here talking about the final position in which *Vms* became *Vns* and in which *V:ms* became *V:ns* and then *V:s*. It is likely that this did not happen in inlaut. Sergio Neri (p.c.) mentions Latin *membrum* and Gothic *mimz* which continue PIE **mēm̥sro*. One can also refer to Mayrhofer (1986:163) who shows the difference between *V:ms* at word end and in internal position.

³ As Johnsen (2005:131–132) points out, Hittite turned this noun into a neuter, as the nominative and accusative singular were homophonous and the equality between nominative and accusative singular was felt as a specific trait of the neuter nouns and adjective forms.

⁴ The origin of the Greek *-eu-* stems remains outside the scope of this article, but different suggestions have already been made to account for the “irregular” form in ην. We believe that the “Stangian” explanation is the most likely one, see Haug 2002:112. E. Bosshardt, *Die Nomina auf eus: ein Beitrag zur Wortbildung der griechischen Sprache*. Zürich 1942 (*non uidi*, quoted in Perpillou 1973:67 and in Haug 2002:111) argued that the accusative was built in *ēum* with consonantic value of the *u* and vocalic value of *m* which lead to **ēwa*. That lost the intervocalic *w* and contraction took place, yielding a form in long *ē*, which was recharacterised as an accusative by addition of an *n*.

- The accusative plural of the of the (predominantly) feminine nouns in **eh₂* goes back to early Proto-Indo-European **eh₂ms*. The evolution of this ending was not ***ah₂ns*, but became **ah₂ns*, then **anns* and then **āns*. This last ending became **ās* in late Indo-European. This evolution is confirmed by Oscan and Germanic: the Oscan forms in *af* can only go back to **ās* (Rix 1986, Weiss 2009:236) and the Gothic form *gibos*, quoted by Rix (1986:586–587) and Weiss (2009:235–236), proves that the syllabification as suggested by Stang is correct (in spite of Beekes 1988b:61): if the ending **eh₂ns* had not become **anns* and eventually **āns*, but **ah₂ns*, the ultimate Germanic result would have been **aHuns*.⁵
- The 1st person in the active optative singular is formed by the suffix **eh₁* and the ending **m*. This sequence **eh₁m* becomes **emm* and then **ēm* but not **eh₁m* and hence not *ea*. Examples are Sanskrit *dheyām* and Greek (τι)θείην. A syllabification *eh₁m* would have given Greek **(τι)θείηα*.

2. The Law and the sequence *VRHm#* or *VHRm#*.

The question is if the Law also applied in cases such as *VRHm#* or *VHRm#*. There are at least two nouns which indicate that *VHRm#* did not become *V:m*. In addition, there is a verbal form, which seems to confirm the assumption that *VRHm* was not subject to the effects of the Law. The Indo-European noun for “ship” can be reconstructed as **neh₂us* and is in that form continued in Greek ναῦς and Sanskrit *nauḥ* while Latin has remodeled the noun into the *i* stems.⁶ The accusative singular of this noun in Sanskrit is *nāvam*, the Homeric-Greek form is νῆα (while the Attic form is ναῦν), and the Latin form is *nāvem*. All these forms can be drawn back to PIE **neh₂um*, albeit with different syllabifications: Attic goes back to a structure **neh₂um* with *m* being consonantic, while Homeric Greek, Latin and Sanskrit are based on a syllabification **neh₂uṃ*. All forms agree in the fact that the

⁵ The application of Stang’s Law and the laryngeals will be dealt with in more detail in De Decker ftc.

⁶ This probably happened under influence of the genitive **neh₂ues* which became **nāves* in Proto-Latin and *nāvis* with the effects of the strong initial stress.

cluster **eh₂um* was not rendered as **ām*. Sanskrit *rayis* and Latin *rēs* can be reconstructed as **(H)reh₁is*. The accusative of that form is **(H)reh₁im* which lead to the Sanskrit form *rayim*, which proves that the sequence **eh₁im* did not become **ēm* in late Indo-European. The Latin accusative *rem* (with short vowel, as is proved by French *rien*) is more ambiguous, as this form could theoretically be the result of a monophthongisation. Compared with Sanskrit *rayim* we would follow Weiss (2009:254) in proposing a Proto-Italic form **reh₁iṃ* with consonantic value of the *i* and syllabification of the *m*. That form would become Proto-Latin **rēiem* in which the intervocalic *i* was lost and the two vowels contracted into one single long vowel *ē*. Later in Proto-Latin the long vowel *ē* was shortened before the final *m*.

A similar evolution can be discerned in the sequence *VRHm*, which did not become *V:m* either. This is proved by the active optative 1st person singular in Arcadian Greek ἑξελάνυοια, which continues PIE **-oih₁m*, and by the Sanskrit *bhareyam*.⁷ In this case the *m* has been syllabified leading to **oih₁ṃ* and not to **ōm*. The Sanskrit ending *eyam* displays the same evolution: *eyam* < **ai yam* < **oi iam* < **oi H am* < **oi Hṃ* < **o ih₁ ṃ* < **oi h₁m*, with syllabification of *m*. Bammesberger (1984a:115–117), on the other hand, argued that the form was not **oih₁m* but **oim*, based on the Germanic forms, and explained the Greek and Sanskrit forms as analogy with the two other persons of the singular, but we believe that the parallel with the athematic optative suffix **i(e)h₁* is more preferable. The accentuation of the 3rd person optative singular (e.g. λείποι) and the locative singular of the *o* stems (οἴχοι) proves that the diphthong *oi* (originating from PIE **oih₁* > **oii* > *oī*) was treated differently from the diphthong *oi* from the nominative plural: the optative ending was treated as a long diphthong whereas the nominative ending was a short one (Mayrhofer 1986:130–131).

The Brugmann (1892:203, 1904b:490)-Hirt (1921:39) theory that the long diphthong *V:um* lost the second element of the diphthong,⁸ is contradicted by the occurrence of forms such as *nāvam*, and can therefore not be kept. Hirt therefore argued that the (non-) syllabification of *m*# in Indo-European was determined by sandhi effects: when a

⁷ In Attic this ending was replaced by *-mi* (Bammesberger 1984a:115).

⁸ This was followed by Pisani 1934, Kuiper 1942:69, Krahe 1966:62 and in recent times by Nassivera (cf. infra).

vowel followed, the *m* was not syllabified and when a consonant followed, the *m* was syllabified (Hirt 1921:39, followed by Szemerényi 1956:197, Haug 2002:112; Johnsen 2005:129). In Haug's view the daughter languages then generalised one or the other form. This has one important drawback, as it does not explain why the same variant was chosen in all languages: Greek, Indo-Iranian and Italic would then by chance all have preserved the same variants. This seems unlikely to us, and we therefore believe that the three examples quoted above show that Stang's Law did not operate after "super heavy" syllables (by which we mean a short followed by two consonants and an *m* or a long vowel followed by a consonant and an *m*), and argue that the syllable structure rather than the sentence structure was the decisive factor: Sanskrit *nāvam* and *rayim* go back to a sequence in which is a vowel followed by two consonants and an *m*; in Sanskrit *dyām*, *kṣām* and *gām* the vowel is only followed by one consonant before the *m* and therefore the *m* is not syllabified. We believe that this also explains the difference in the Greek optative forms such as ἔξελαύνοια with syllabification **oih₁m* and ἱσταίην from **stisth₂-ieh₁m* with assimilation of the laryngeal, which lead to the ending **iemmm* and then **iēm*, which eventually became Greek -ίην. It is therefore our opinion that the "super heavy" structure prevented the Law from operating, and, as will become clear later in the article, this is an important element in the discussion of the etymology for the word for "cow".⁹

3. The laryngealless reconstruction **g^wous*.

The Indo-European word for "cow, ox" is generally reconstructed as **g^wous*. Its accusative is **g^woum* which in agreement with the Law becomes **g^womm* and ultimately *g^wōm* (this evolution was elaborated by Schindler 1973:154, who explicitly argued against the presence of a laryngeal in this root). The accusative form **g^wōm* is directly reflected in the daughter languages: Sanskrit *gām*, Doric and Homeric Greek βῶν,¹⁰ Umbrian **bum** and Volscian *bim* (for these last two see Weiss

⁹ We deal with the theory of Nassivera-Kortlandt later in this article.

¹⁰ The form occurs in Iliad 7,238. We were somewhat surprised to read in several commentaries (Willcock 1978:255, Kirk 1990:266-267) that this form was either dialectal or anomalous: Kirk called it probably Aiolic, survived in Doric and

1993:12 and 66). Latin nominative *bōs* displays an anomalous first syllable and is in all likelihood borrowed from a Sabellic language, as the expected nominative form would have been **vus* (Buck 1904:94, Walde 1905:94, Weiss 1993:12, 2009:247). The Latin accusative singular *bōvem* and accusative plural *bōvēs* are remodeled on the genitive *bōvis*.

4. *The reconstruction with laryngeal*: **g^wh₃eus*, **g^weh₃us* or **g^wēh₃us*.

Three laryngeal reconstructions have been made:

- **g^wh₃eus* (De Saussure 1878:198–199),
- **g^weh₃us* (Kuryłowicz 1927:224–225, Rix 1976:147),
- nominative **g^wēh₃us*, (Lubotsky 1990:133–134, Nassivera 2000) with
 - genitive **g^wh₃eus* (Lubotsky 1990:133–134) or
 - genitive **g^wh₃ous* (Nassivera 2000:61).

De Saussure (1878:198–199) assumed a laryngeal because the genitive singular and the weak cases in Sanskrit were formed on a stem **g^wo*. He argued that if the noun had been **g^wous*, a stem **g^wu* would have been expected for the weak cases. Kuryłowicz (1927:224–255) and Lubotsky (1990:133–134, 1995:226–227) followed this reasoning, but without mentioning that de Saussure had already noticed this in 1878. Kuryłowicz (1927:224–225) pointed at the hiatus in Vedic poetry in certain forms of the noun *gauḥ*, and ascribed that to the effects of an original laryngeal. Lubotsky (1990:133–134, 1995:226–227) pointed at the Sanskrit case forms *goh*, *gave* and *gavām* and noticed the absence of the effects of Brugmann's Law. This proved that the root could not have been **g^wou* because forms such as **g^woues*, **g^wouei* and **g^wouom* would have undergone Brugmann's Law in Proto-Indo-Iranian. Combined with the long *a* of the accusative singular and plural, and the nominative singular and plural, this long *a* would never have been replaced. He therefore suggested a nominative **g^wēh₃us* (with lengthened grade) and a genitive **g^wh₃eus*. This explained the genitive form *goh* and also accounted for the short *a* in the dative sin-

Willcock stated that this was a dialect variant of the common βοῦν. We believe that this form is one of the precious linguistic archaisms in the Homeric language.

gular and genitive plural as $*h_3e$ did not undergo the effects of Brugmann's Law. An additional argument to reconstruct $*g^wh_3e$ was the link with Greek $\beta\acute{o}\sigma\kappa\omega$ and $\beta\omicron\tau\acute{o}\varsigma$: these two Greek words were formed on a root $*g^wh_3e$ without u extension (Lubotsky 1990:133–134). Nassivera 2000, following Kortlandt, Beekes and Lubotsky, rejected the reconstruction $*g^wous$ (and $*g^woum$ for the accusative) because he considered Stang's Law and Schindler's adaptation of it to be wrong. For this assumption he adduced two elements. First of all, the Indo-European word for “nine” ($*h_1neum$) had not undergone the effects of the Law, while the sequence $*eum$ should become $*\bar{e}m$, if the Law were a valid Indo-European sound law. Secondly, he argued –following Gauthiot and Boutkan¹¹– that at word end there was no phonological difference between $*m$ and $*n$. These two elements proved that the evolution $*Vwm > *Vmm > *V:m$ as proposed by Schindler was wrong. He therefore argued that the old theory $V:um > V:m$ had to be preferred, and reconstructed $*di(y)\bar{e}um$. For the accusative singular of “cow” Nassivera reconstructed $*g^w\bar{e}h_3\bar{e}m$ and explained this form as analogical creation after the accusative of “ship” $*n\bar{e}h_2\bar{e}m$, which was a later form of $*n\bar{e}h_2\bar{e}um$. The old paradigm for “ship” was the following: nom. $*neh_2us$, acc. $*nh_2eum$, gen. $*nh_2uos$. The nominative and accusative of that paradigm were replaced by $*n\bar{e}h_2us$ and $*nh_2\bar{e}um$ under the influence of the forms $*di(y)\bar{e}us$ and $*di(y)\bar{e}um$. Then the accusative form $*nh_2\bar{e}um$ was replaced by $*n\bar{e}h_2\bar{e}um$ under the influence of the newer nominative $*n\bar{e}h_2us$. The form $*n\bar{e}h_2\bar{e}um$ became $*n\bar{e}h_2\bar{e}m$, as $-\bar{e}um$ in the final syllable became $*\bar{e}m$. The form then influenced the paradigm of “cow”, creating the form $*g^w\bar{e}h_3\bar{e}m$. Nassivera added that Eichner's Law was no counter-argument as he believed that this law did not operate nor in Greek nor in Balto-Slavic nor in Latin.¹² He pointed at the future of the root $*deh_3$, which he reconstructed as $*d\bar{e}h_3s-$: the Baltic accentuation and the Greek form proved that the long vowel was coloured by $*h_3$ after all.

¹¹ Gauthiot, R., *La fin de mot en indo-européen*, Paris, 1913:158, Boutkan, D., *The Germanic “Auslautgesetze”*, Amsterdam-Atlanta, 1995:52 (*neutrum librum uidi*).

¹² He pointed at Beekes, MSS 36 (1977), 5–7 (*non uidi*) and Schrijver (1991:129) to prove that Eichner's Law did not operate in any Indo-European language outside Anatolian.

5. Criticism of the reconstruction with a laryngeal.

The reconstructions $*g^weh_3um$ and $*g^wēh_3us$ have the problem that they cannot explain the Vedic accusative singular $gām$, next to the accusatives $rāyīm$ and $nāvam$, and the Homeric accusative $βῶν$ next to $vḥa$. If the reconstruction had been $*g^weh_3um$, it would have had the same structure as $*neh_2um$ and $*reh_1im$, namely $VHRm$. As shown above the cluster $VHRm$ did not yield $V:M$ but $V:Rm̃$. It is therefore difficult to see why $*reh_1im$ and $*neh_2um$ would have given Sanskrit $rayīm$ and $nāvam$, but in the case of $*g^weh_3um$ would have given $gām$. We believe that this is probably the most important element against the reconstruction with a laryngeal. The same problem applies to the accusative plural $gās$ next to $rayis$ and $nāvas$. Another element against this reconstruction is that the *casus obliqui* of Sanskrit cannot be drawn back to $*g^weh_3u$ because they have forms with a short a . The reconstruction $*g^weh_3u$ also poses a problem for the Greek nominative plural: one would expect a form $*βῶεξ$. If the weak cases were built on $*g^wh_3u$, there is a problem as well, because $*g^wh_3u$ does not yield gav in Sanskrit. In the reconstruction $*g^wh_3eus$ the long vowel of the nominative plural is an argument against the use of a laryngeal: $*g^wh_3eues$ would not have become $gāvah$ because $*h_3e$ did not undergo Brugmann's Law (Lubotsky 1990). The second problem with the reconstruction $*g^wh_3eus$ is that the oblique cases cannot easily be explained either. If the oblique cases were built on $*g^wh_3eu$, they can explain the Indo-Iranian case forms but not the Sanskrit compounds $śatagu$ nor $pṛśnigum$ nor Greek compound $ἐκατόμβη$. If the oblique cases were built on $*g^wh_3u$, they cannot explain the oblique cases of Indo-Iranian nor the Greek compound. The word $ἐκατόμβη$ can be reconstructed as $*(h_1/d)k'mtom-g^w(u)-eh_2$ with zero grade in the root for "cow" (Schmalstieg 1973:114; Chantraine 1999:314–315). A reconstruction starting from $*g^wh_3e$ or $*g^wh_3u$ would have given a word $*ἐκατομβόη$, as the cluster $*h_3e$ would not have been dropped in Greek, and $*g^wh_3ueh_2$ would probably have given $-βόη$ as well.¹³ We are skeptical about the reconstruction $*g^wēh_3us$ in the *casus recti* and $*g^wh_3eus$ in

¹³ The Greek word itself is remarkable, as it should normally have given $*ἐκατόγγη$ with velar and not a labial as the following labial element would have "removed" the labial element of the labiovelar but the link with the noun $βοῦς$ has probably restored the labial b .

the *casus obliqui* (as compiled from Lubotsky 1990 and 1995) because it supposes that a nominative singular can have both an ending *s* and lengthened grade. We believe that this did not happen in Indo-European (Szemerényi 1956:196 but he was criticised for that most recently by Johnson 2005:130), and believe (among others with Weiss 2009:247 against Mayrhofer-Paßler 1953:83–84) that the lengthening in the nominative singular in Sanskrit and Avestan was an innovation within Indo-Iranian. This reconstruction also assumes that a long vowel $\bar{e}$ could be coloured by a laryngeal. There is, however, strong comparative evidence to the contrary (Eichner 1972, Mayrhofer 1986:132–133, Jasanoff 1988, Rasmussen quoted in Vine 2006, Vine 2006). The last problem in this reconstruction is the laryngeal metathesis between strong and weak cases. The Greek $\beta\acute{o}\sigma\omega$ and $\beta\acute{o}\tau\acute{o}\varsigma$ are in our opinion no argument against the reconstruction without laryngeal. If these were built on $*g^wh_3e$ without *u* extension, we see no reason why such a scenario could not apply to a root $*g^wo$. We nevertheless think it more likely that $\beta\acute{o}\sigma\omega$ and $\beta\acute{o}\tau\acute{o}\varsigma$ were built on those case forms of $\beta\acute{o}\upsilon\varsigma$, such as the genitive $\beta\acute{o}\acute{o}\varsigma$, where the intervocalic digamma had already disappeared (which could have happened quite early). Lubotsky argued also that a root $*g^w(u)$ would not have been acceptable, but we believe that the (already quoted) Greek $\acute{\epsilon}\kappa\alpha\tau\acute{o}\mu\beta\eta$ is evidence to the contrary.

We are not convinced by Nassivera's arguments. First of all, as Johnsen (2005:133–136) argued against Blažek (1999:195), Indo-European “nine” might well have been $*h_1neun$ after all: Latin *novem* could have “received” its *m* by analogy with $*septm$ and $*dek'm$. Secondly, Latin shows that in auslaut *n* and *m* remained distinct: $*-m\#$ became *em* in the accusative, while the suffix $*mn\#$ became *men*. As such, we believe that Nassivera's arguments against Schindler and Stang are no longer valid. Moreover, as Johnsen (2005:133–136) has shown, Stang's Law only applied to *m* and not to *n* as Martínez-García (1997:213) assumed. His example used to dispose of Eichner's Law is in our opinion not entirely valid either. If the future of the root $*deh_3$ were built on a lengthened grade, the form would have been $*dēh_3-s-$, which according to Eichner's Law should have given Greek $*dēh_3\omega$. We think that it is conceivable that a paradigm present $\acute{\delta}\acute{\iota}\delta\omega\mu$ and future $*dēh_3\omega$ would have been reformed into present $\acute{\delta}\acute{\iota}\delta\omega\mu$ and future $\acute{\delta}\acute{o}\omega\omega$. We have our doubts as to the reconstruction of a sigmatic nominative with *vrddhi* (see above), and are rather skeptical towards

a reconstruction of an accusative with lengthened grade in root and suffix (an observation made by Nassivera himself as well). We, therefore, believe it is simpler to accept the Laws of Szemerényi, Stang and Eichner, and to explain the difference in treatment of *m*# by the heaviness of the preceding syllable. This is less complicated than assuming analogical extensions of lengthened grades for which there are few, if any, parallels. As argued when dealing with the Brugmann-Hirt theory, Nassivera's reconstruction cannot explain why in *gām* the *m* was not syllabified and in *nāvam* this was the case (especially if both forms went back to a form without *u* in late Indo-European), nor can it explain the difference in treatment of **m*# in the optative forms of the thematic and athematic conjugations. Lastly, we believe that the absence of disyllabic forms of the accusative *gām* in Avestan proves that this paradigm never had a laryngeal in the first place: if the late Indo-European form had been **g^wēh₃ēm*, the proto-Indo-Iranian form would have been **gāHām*, and Avestan would in all likelihood have preserved traces of this because it preserved the laryngeal hiatus better than the Indic branch (cf. *infra*).

6. Problems with the "laryngealless" reconstruction.

There are also issues with a reconstruction without laryngeals. The weak cases of a nominative **g^wous* are problematic (as was already noticed by de Saussure 1878) because this implied a root form **g^wu* which would be against Indo-European root constraints (Lubotsky 1990, 1995). In addition, Lubotsky pointed at the lack of Brugmannian lengthening in the weak cases in Sanskrit. Starting from a root **g^wou* the genitive would have looked like **g^wouos* (if the form **g^wou* was used throughout the entire paradigm) and this should have given **gāvas* with long *a*. If it had been built on the weak cases, the form would have been **gvas* or **guvas* (if the full grade is **g^wou*, the zero grade is **g^wu*). Both observations can be answered. That there was no root form **g^wu* is contradicted by the Greek compound ἐκατόμβη (which was already discussed above) and by the Sanskrit forms *śatagu* and *prśnigum*. That the weak cases have not undergone Brugmann's Law can be explained if one assumes that **g^wous* had a nominative **g^wous* and a genitive **g^weus* as in **nok^wts*, genitive **nek^wts* (a solution that was proposed *dubitanter* by Rix 1976:147 who nevertheless pre-

ferred to work with a reconstruction **g^weh₃us*). This raises two other problems, namely the lack of palatalisation in the Indo-Iranian weak case forms (the genitive **g^weus* should have become **geus* and then **jeus*, then **jaus*, then **jos* and not *gos* as is attested in Indic) and the absence of this *e* vocalism in Greek and Italic. Both can be explained by assuming an *Ausgleich* in the declensions. Indo-Iranian would have had a nominative *gaus* and a genitive **jos*, and would have normalised the declension in favour of the anlaut of the nominative. Greek has no traces of the ablaut type N **nok^wts*, G **nek^wts* as it has in most cases generalised the vocalism of the nominative and generalised the genitive ending *os*,¹⁴ or it has created two different nouns out of one single paradigm, as is the case with γῆρας and γέρας. An Indo-European declension **g^wous* **g^weus* would have created in Greek the forms βούς and *δευς as before a palatal vowel the labiovelar is rendered by a dental and not by a labial. It is in our opinion clear that this anomalous declension would have been subject to restructuring in favour of the nominative. As stated above, we believe that the long diphthong of the nominative in Indo-Iranian was an innovation of that branch, and not of Indo-European date, as normally a lengthened grade and a sigmatic nominative do not co-occur (Szemerényi 1956:196). We believe that the vocalism in the noun *nauh* was one of the factors in this evolution. In *nauh* the long diphthong was etymologically justified and not the result of *vrddhi*. We think that the long vowels of the accusative singular and accusative and nominative plural contributed to the lengthening of the vowel in the nominative singular, changing the form **gaus* into **gāus*. This must have happened rather early in Proto-Indo-Iranian as it happened before the monophthongisations of the diphthongs (but after the effects of Brugmann's Law).

We have seen that Umbrian **bum** and Volscian *bim* were important elements in the discussion, but the Latin forms do not allow us to draw any conclusions. The accusatives *bovem* and *boves* are analogical reformations based on the genitive. The accusative singular *nāvem* seems to be in line with our analysis of the heavy syllables before the *m* but it is also possible that this accusative was built after the nominative *nāvis* was attracted to the *i* stems, and that analogy with *civis* and *ignis*

¹⁴ Unless one assumes that the form Ὀδυσσεύς in Odyssey 24,398 is an archaic genitive in *s*. Perpillou (1973:59) and Martínez-García (1997:214) consider it to be a young form.

played a role. The existence of accusatives such as *nāvim* and *nāvīs* next to *nāvem* and *nāvēs* seems to confirm this. Moreover, the declension of the *i* stems and the consonant stems in Latin is so riddled with reciprocal analogical reformations that a sound judgement on the inherited *i* stem nature is often difficult to make (Bammesberger 1984b:87–88, Untermann 1992:139, Klingenschmitt 1992:113–117). Old-Latin has a form *bovid* (Weiss 2009:248), which seems to indicate that this noun was also attracted to the *i* stem nouns at some period of (Proto-?)Latin.

Finally, we have to address the fact that in Vedic the compounds and case forms of *go-* are often disyllabic (Oldenberg 1888:187, Arnold 1905:89–90), which could be used to prove that there might have been a laryngeal in this word. Vedic poetry should be used with great caution, as it is often unclear whether a disyllabic scansion was an inherited feature or a metrical device, and therefore should not be used as evidence for a laryngeal (Weiss 2000:61). Lubotsky 1995 had noticed that the Vedic bards sometimes reinterpreted an inherited long vowel as two short vowels. The compounds and some case forms of *gauḥ* are scanned disyllabic in Vedic but never in Avestan (Kuryłowicz 1928:205; Monna 1978). This is a strong indication against the assumption that there was ever a laryngeal in this declension. Kuryłowicz therefore reversed his stance and as of 1935 reconstructed **g^wous*. In addition, we would like to point to the word *kṣām*, whose forms are sometimes scanned disyllabic as well (Oldenberg 1888:187, Arnold 1905:89–90) but this noun never had a laryngeal. As such, we believe that this "hiatus" is a metrical device and cannot be used as comparative evidence against the reconstruction **g^wous* without laryngeal.

7. Conclusion

The article investigated the etymology of the Indo-European word for "cow, ox". We started with a look at Stang's Law and argued that it applied in case of *VHm#*, *VR_{+lab} m#*, *VR_{+lab} ms#* and *VHms#* but not in case of *VHRm* or *VHRm*. With that knowledge we discussed the reconstructions (with and without laryngeal), and found that the forms of the accusative singular in Indo-Iranian, Greek and Italic and the compounds in Greek (ἐκατόμβη) and Sanskrit (*śatagu* and *pṛśnigum*) proved that the root could not have had a laryngeal. We also

addressed the two main arguments against the laryngeal-free reconstruction (the short *a* in the oblique cases and the hiatus in Vedic poetry). We found that the short *a* can be explained via the ablaut type nominative **nok^wts*, genitive **nek^wts* which was preserved in Indo-Iranian, but remodeled analogically in Greek and Italic. The hiatus is a metrical device confined to Vedic Sanskrit only and therefore not of (Proto-)Indo-Iranian date. It can therefore not be used to prove the presence of a laryngeal. As a result, it is our opinion that the etymology **g^wous* is the most likely and should not be abandoned.

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