7. I have argued on other grounds for a consultant/client relationship, and thus for some degree of joint composition, in *Lysias and the Corpus Lysiacum*, 148–174.

8. B. Rosenkranz, *Indog. Forsch.* 48 (1930), 131 f. postulates a 'Kanzleisprache, die der Entwicklung der lebenden Sprache nur langsam nachfolgt', and implicitly identifies prose literature with 'die Sprache des taglichen Lebens'.

9. E.g. γλῶτ(τ)αν, W. Peek, *Kerameikos* iii (1941), no. 3.29. Ibid. no. 2.5 f. πράσ(σ)ει seems to point the other way, but the Attic *defixiones* sometimes contain elements of poetic language designed to give magical potency (e.g. ἔπεα, μήποτε).

10. The history of -οισι vs. -οις is less tidy, but comparable.

11. Stylistic variation (cf. the end of section 4 below) may possibly have determined the choice of ὀλείζων after two instances of ἐλάττων in close succession.

12. Cf. M. B. Walbank, *Athenian Proxenies of the Fifth Century B.C.* (Sarasota, Fla., 1979), no. 63. (I owe the reference to Dr D. M. Lewis, who tells me that the decree will appear in *IG* i³ as no. 177.)

13. Cf. a mid-fifth century document from Halikarnassos, Meiggs and Lewis no. 32.42–5 τούτωι ἐλεύθερον ἔναι, ὃς ἄν . . . , κατόπερ . . . , ἐπικαλεῖν.

14. A slip for παραβάντος. Cf. Meiggs and Lewis no. 38 (Selinus, fifth century) 7–10 ἐν χρυσέο[ι] ἐλά[σ]αντα[ς] . . . καθθέμεν τὸ Διὸ[ς . . (.)] γράψαντες (sic) κτλ.

15. *SEG* x 114 (*IG* i² 103), a commendatory decree of 421/1, begins with a long ἐπειδή-clause, but the verbs therein are coordinated by τε and καί. *IG* xii (1) 1032.1–20 (Karpathos, s. IV ex.) is more complex, involving some participial clauses.

16. In *Wege der Forschung* cclxxv (*Aristophanes und die alte Komödie*), 131 f.

17. It seems to me that when λευκωτής, λιθοπριστής and λογιστής are not to be found among the c. 1700 entries in the index of G. Redard, *Les Noms grecs en -της, -τις* (Paris, 1949), nor ληξιαρχικός and λιθουργικός in the index of P. Chantraine, *Études sur le vocabulaire grec* (Paris, 1956), 75 pages of which are devoted to -ικός, something has gone wrong with our approach to the history of fifth-century Attic.

18. i.e. λήξεως, with omega despite the following δόσεος.

19. ἀλφάνειν happens not to occur in Attic prose (despite several references in the orators, e.g. Is. ii 34, to money raised by sale); but though in epic and Euripides, it is not specifically poetic, for it is attested in colloquial contexts in comedy (Ar. fr. 324, Eup. fr. 258).

20. ῥ[υ]θμέσει' in *SEG* x 142.8 was a false reading; cf. E. W. Handley, *BICS* 23 (1976), 58.

21. H. T. Wade-Gery, *Essays in Greek History* (Oxford, 1958), 182, translates as if we had ἐὰν καταδικάσηι and (181 n.) betrays some uneasiness about the syntax, but does not consider the possibility of εἰ . . . καταδικάσ[ηι.

GREEK FACTITIVE VERBS IN -οω, -αινω AND -υνω

By Elizabeth Tucker

IN reconstructing linguistic history comparative philologists tend to look at the facts either from a formal or a functional point of view, but rarely from both at once. It is the aim of this article[1] to attempt to combine both approaches in reconsidering the early history and prehistory of some classes of denominative verbs in Ancient Greek.

From a morphological point of view the denominatives in -οω represent a regular type of Greek verb, as their conjugation is parallel to that of four other important classes, the verbs in -εω, -αω, -υω and -ιω.[2] But in function the -οω denominatives are quite distinct, as their meaning is invariably factitive. Their functional equivalents are verbs in -αινω and -υνω. All three suffixes could be employed to derive factitives from thematic stem adjectives, and Greek possessed functional doublets such as λευκόω *and* λευκαίνω both meaning 'I make white', and both derived from the *o*-stem adjective λευκός 'white', or σεμνόω *and* σεμνύνω both meaning 'I make grand, I magnify', and both derived from the *o*-stem adjective σεμνός 'grand, solemn'.[3]

This investigation will begin with the -οω verbs, as they form the largest and most productive class of factitives based on *o*-stem adjectives. The verbs in -αινω and -υνω will be considered in the second part of the article, where an attempt will be made to explain why the suffixes -οω, -αινω and -υνω could all convey the same sort of meaning.

As far as the history of the -οω verbs is concerned there is general agreement on two points. Firstly, the -οω class is a Greek innovation: the derivation of -οω verbs from *o*-stem nominal forms within Greek is clear, but their morphology cannot be compared to that of any verbal class in any other IE language. Secondly, present stem forms are very scarce in Homer, which suggests that this tense-stem was the last to be created.[4]

At this stage all agreement and all certainty ends. No detailed study of the Greek -οω class has been made since Ernst Fraenkel's *Griechische Denominativa*, published in 1906, and in the interim the decipherment of Linear B has shown that the origins of the -οω class go back further than was previously assumed. A fresh examination of the early Greek evidence is therefore necessary.

Attic possessed a unified -οω class, and here all -οω verbs regularly show a factitive meaning, e.g. δουλόω 'I enslave, I make into a slave' beside the noun δοῦλος 'slave' and ἐλευθερόω 'I free, I make free' beside the adjective ἐλεύθερος 'free'. However, in Homer there appear to be two semantic types: a type whose meaning has been described as 'instrumental', e.g. πυργόω 'I fortify, I equip *with* towers' beside the noun πύργος 'tower, fortification', or οἰνόω 'I make drunk, I make affected *by* wine' beside the noun οἶνος 'wine';[5] and a type whose meaning is factitive in the narrower sense, e.g. ἀλαόω 'I blind, I make blind' beside the adjective ἀλαός 'blind', or ὀρθόω 'I straighten, I make straight' beside the adjective ὀρθός 'straight'. This semantic distinction corresponds to the derivational history of the verb in question: if it is derived from an adjective its meaning is factitive, if from a noun it shows the instrumental meaning.[6]

The semantic and derivational division in the early -οω class that has just been indicated may appear obvious enough, but it should be emphasized as it leads to an important morphological observation. Factitive -οω verbs derived from 22 different o-stem adjectives[7] are attested in Homer.[8] These show no perfect forms at all,[9] but their s-aorist/s-future and aorist passive tense-stems are very common. On the other hand, among the 20 verbs with instrumental meaning derived from nouns[10] perfect middle forms, especially participles, are nearly as frequent as sigmatic stem forms, while aorist passive forms are comparatively scarce. Thus the Homeric evidence reveals a clear-cut difference in the inflectional morphology of the two types that have been distinguished above according to semantic and derivational criteria.

There is not space here to discuss all the problems raised by the Mycenaean evidence, but it may not be entirely by chance that the few Mycenaean forms which appear to represent -οω verbs fit in with the pattern found in Homer, *e-re-u-te-ro-se* (PY Na 395, 568, 924) is almost certainly from the same verb as Attic ἐλευθερόω 'I free', and the adjective from which it is derived, *e-re-u-te-ro* (ἐλεύθερο-), appears in the same series of tablets (PY Na 185, 248, 941, etc.). It is clearly a sigmatic stem formation (more likely 3rd singular aorist active ἐλευθέρωσε than future ἐλευθερώσει), such as those which are attested frequently among the Homeric factitives derived from adjectives. *qe-qi-no-me-no* (PY Va 482) and *qe-qi-no-me-na* (PY Ta 707, 708, 713) can hardly be taken as anything other than perfect middle participles in -ωμενο-. For *qe-qi-no-to* (PY Ta 642) there are two main possibilities; either it is an adjective in -ωτο- (which is difficult in view of the reduplication),[11] or it is a 3rd person singular perfect middle indicative form in -ωτοι[12] (this interpretation involves accepting a rather unusual syntactical construction). This Mycenaean verb is always employed as a craftsman's technical term, describing the ornamentation or technique of construction used for chairs and tables, and so from the point of view of meaning and etymology it has been compared to the Homeric adjective δινωτός which also describes ornamented furniture (*Il.* 3.391, *Od* 19.56), and, in one passage (*Il.* 13.407), a shield. δινωτός is no doubt connected with the noun δῖνος 'whirling, turning', and so if the connection of *qe-qi-no-me-na* etc. with the former is correct, Mycenaean shows perfect middle forms from a verb which is derived from a noun.

This bipartition in derivational history, meaning and morphology for which evidence is to be found among the Homeric (and possibly also the Mycenaean) -οω forms suggests that the Greek -οω class was composed of two originally distinct types of verb, whose development may have been completely different. On the one hand, there appears to have been a type derived from nouns whose characteristic formation was a perfect middle stem meaning 'to be in a state of being endowed with x/affected by x'; e.g. κεχόλωται 'is in a state of being affected by χόλος (anger)'. The same verbs also regularly possessed an s-aorist stem with a transitive sense 'made endowed with x/affected by x'; e.g. ἐχόλωσε 'made affected by χόλος, made angry'. On the other hand, we find a type derived from adjectives which occurs most frequently in sigmatic stem and aorist passive stem forms, and whose meaning is invariably factitive; e.g. ὤρθωσε 'he made ὀρθός, he set upright', ὀρθωθείς 'having been made ὀρθός, having been set upright'.

It is only the true factitives, the type derived from adjectives,

whose function is sometimes duplicated by verbs in -αινω and -υνω. However, some further discussion of the type derived from nouns (referred to below as the χολόω type) is necessary as a preliminary to a re-examination of these de-adjectival -οω verbs.

For -οω verbs of the χολόω type Brugmann's suggestion[13] of an original connection with adjectives in -ωτο- (e.g. χολόω/χολωτός, στεφανόω/στεφανωτός) still offers the most plausible explanation, even though it is not supported by much direct evidence from early Greek, and the prehistory of the -ωτο- adjectives themselves is far from clear.[14] However, perfect middle participles, which are particularly common among the forms attested in Homer for this type of -οω verb (βεβροτωμένα, τεθυωμένον, κεκακωμένον, ρερυπωμένα, κεχολωμένος etc.) could have been created in isolation, while no finite verbal forms yet existed, according to the well-known pattern of Greek word-formation exemplified by ὅσα ἀκίνητα καὶ κεκινημένα (Plato *Soph*. 294d).[15] In other words, reduplicated participles in -ωμενο- (e.g. κεχολωμένος) could have been created opposite adjectives in -ωτο- with privative ἀ- (e.g. *ἀχόλωτος) according to the converse of the Greek rule that a participle in -μενο- cannot be compounded, but, if a compound form is required, an adjective in -το- must be employed.[16] Mycenaean formations such as *a-ra-ro-mo-te-me-no/a-na-mo-to* (KN Sd 4401 etc./KN Sf 4420 etc.) and *a-ja-me-na/a-na-i-ta, a-na-ta* (KN Sd 4408 etc./KN Sf 4419 etc.) now prove that this pattern of word formation was already established in the second millennium B.C., and so could have predated the creation of the first participles in -ωμενο-. Not only the form, but also the meaning of these participles receives an explanation via this hypothesis, since their instrumental sense 'being in the state of being endowed with/affected by *x*' is the exact converse of the sense shown by privative adjectives in -ωτο-.[17]

It is easy to understand how finite verbal forms (κεχόλωται, κεχόλωτο) could have been created beside such participles (κεχολωμένος) which had the verbal characteristic of reduplication.[18] However, in addition to finite forms with reduplication, forms built on a sigmatic stem are also attested very frequently among verbs of the χολόω type in Homer. The sigmatic stem forms supply a transitive counterpart to the perfect middle formation and adjectives in -ωτο-; their function is seen most clearly in two Homeric

passages where they occur in juxtaposition with forms of the other sort, κεκακωμένοι/ἐκάκωσε 'being affected by affected by misfortune' (*Il*. 11.690), and ἀπύργωτον/πύργωσαν 11.264). Accordingly, in the case of this type of -οω verb there are good reasons for accepting Wackernagel's suggestion[19] that the aorists in -ωσα were created via the same process as that which produced new transitive s-aorists opposite some inherited intransitive root aorists characterized by a long vowel; e.g. ἔστησα 'I set' beside ἔστην 'I stood', ἔφυσε 'produced, caused to grow' beside ἔφυ 'was, became' and ἐβίωσαο (*Od*. 8.468) 'you made live, you gave life to' beside βιῶναι (*Il*. 15.511 etc.) 'to live'.[20] For at a date when the perfect active still regularly possessed an intransitive value, an aorist formation would be the only possible transitive counterpart to a (plu)perfect middle.[21]

The -οω verbs that are derived from nouns and show an instrumental sense may thus be explained as an innovation created according to morphological patterns that were established in Greek at an early date, and their full conjugation may have developed out of the two tense-stems whose origins have been discussed above. The -οω factitives derived from adjectives, on the other hand, present a completely different range of problems. For -οω verbs derived from nouns may be explained via morphological and syntactical developments that took place within Greek, in the case of the factitives this is out of the question. Here we are dealing with a particular sort of relationship between the verb and its base-word which is invariable in all attested tense-stems.

Brugmann[22] compared the Greek factitive νεόω 'I make new' derived from the adjective νέος 'new' to Lat. (re)novare, OHG niuwōn 'to make new', and suggested that it might have directly replaced an earlier formation νεάω[23] under the influence of a phrase such as νέον ποιέω. However, since he believed the earlier νεάω to represent fundamentally the same type of denominative formation as, e.g. τιμάω, a derivative from a feminine ā-stem noun, he was unable to explain its factitive value.

It is now possible to compare νεάω with a verb in a third IE language, Hittite *newaḫḫ-* 'to make new'.[24] *newaḫḫ-*, which stands

beside the adjective *newa-* 'new', belongs to a large class of Hittite denominatives which are derived from adjectives by means of a suffix *-aḫḫ-*, and which possess a factitive sense, e.g. *arawaḫḫ-* 'to make free' beside the adjective *arawa-* 'free', *maršaḫḫ-* 'to corrupt, to falsify' beside *marša-* 'false, bad', *dannattaḫḫ-* 'to devastate' beside *dannatta-* 'empty, deserted', *papraḫḫ-* 'to make impure' beside *paprant-* 'impure' etc.

In a paper addressed to the Philological Society in 1971 C. Watkins took the Hittite process of derivation to reflect the situation in the IE parent language.[25] According to Watkins IE possessed a denominative suffix $*-\bar{a}-$ ($*-eH_2-$) which was used to derive verbs with a factitive value from adjectives, and whose function was quite distinct from that of the suffix $*-\bar{a}-$ which built feminine nouns. Thus, Lat. *novare*, OHG *niuwōn* and Hitt. *newaḫḫ-* may all continue an IE factitive verb $*new-\bar{a}-$ ($*new-eH_2-$) 'to make new' derived from the adjective $*new-o-$ 'new'. Watkins also states: 'The primary comparative fact in Greek is the continuation of the *function* of this suffix in the verbs in -οω like νεόω "renew". There has been a formal innovation in Greek, which we may or may not be able to give a satisfactory account of. But it is clear that the innovation is secondary and *einzelsprachlich*'.[26]

From a semantic point of view this comparison and reconstruction is very attractive. If the Greek -οω verbs derived from adjectives continue an IE class which possessed a factitive value, the value of the Greek verbs no longer creates a problem. On the other hand, it is difficult to accept the equation unless the Greek verbs may also be related to the IE prototype from a formal point of view, and at first sight it appears impossible to explain how a suffix $*-eH_2-$ could be continued by a suffix -ŏ-/-ō- in Greek. Nevertheless, it might be possible to explain the morphology of the Greek verbs via a formal replacement, as Brugmann and Watkins envisaged. Such a replacement would be understandable for the following reason: in all the languages where there are certain reflexes of this IE class the suffix $*-\bar{a}-$ is used to derive factitive verbs *primarily* from thematic adjectives.[27] This suggests that in origin the suffix may have consisted of the thematic vowel $*-e-$ + $*-H_2-$. Thus it seems that Greek could have simply renewed the

ancient connection that once existed between the factitive verbs and their thematic base-words. However, Brugmann's suggestion that νεάω was directly replaced by νεόω is at odds with the Homeric evidence which indicates that the present with -ŏ- is a later creation than the other tenses with suffix -ō-.[28]

There does not appear to be any direct evidence to show precisely how this replacement may have come about in Greek, but in view of the conclusions reached above concerning the origins of the other type of -οω verbs the following hypothesis may be suggested.

The present inflection that Greek would have inherited for the $*-\bar{a}-$ factitives cannot be reconstructed securely, since a clearly defined morphological class with this suffix is preserved only in Hittite; here both *-ḫi* and *-mi* conjugation forms occur, and it is hard to determine which are the earlier.[29] Notwithstanding this uncertainty concerning the original inflectional pattern shown by the $*-\bar{a}-$ factitives, we may still be reasonably sure that the present stem inherited by Proto-Greek for this class would have been different from that of denominative presents on *ā*-stems, which were built with the suffix $*-ye-/-yo-$.[30] However, Greek created a complete conjugation with the full range of tense-stems for denominatives of all types, and it is hard to imagine what form, for instance, an *s*-aorist from a factitive $*-\bar{a}-$ verb could have taken other than $*-\bar{a}-sm̥$. This would have been formally identical to the *s*-aorist created for the *ā*-stem denominatives (e.g. ἐτίμησα < $*e-tim\bar{a}-sm̥$) and yet its semantic function would have been completely different.

If the earliest -οω verbs belonging to the other group, the derivatives from nouns, were created in the manner suggested above, an *s*-aorist in -ωσα with a transitive value may have been in use in this type of *o*-stem denominative from an early date in the history of Greek. Such aorists could have served as a model for the creation of aorists in -ωσα for the inherited factitives, so that they were differentiated formally from the *ā*-stem denominatives in their sigmatic stem. In other words, after the analogy of -ωσα aorists which stood beside *o*-stem nouns and meant 'I made endowed with *x*/affected by *x*', aorists in -ωσα meaning 'I made *x*' could have

been derived within Greek from the same o-stem adjectives which in the parent language had served as the base for a verbal derivative in *-eH_2- with factitive value.[31] A sigmatic stem would be the only tense-stem that could be created in the first instance after the model of verbs of the χολόω type, since it is the only tense-stem whose value is close to that of the inherited factitives and which is likely to have existed at an early date.

If the -οω verbs derived from adjectives continue an IE type of denominative factitive that was associated with thematic stems, the question then arises: what is the origin of the formations in -αινω and -υνω which fulfill the same function in Greek?

Homer sometimes uses a factitive in -αινω besides an inherited thematic adjective, and the expected -οω formation is lacking altogether or does not appear until later Greek; e.g. θερμήνη (*Il.* 14.7) 'made warm' beside θερμός 'warm', cf. Lat. *formus*, Av. *garəma-*, etc.: *θερμόω is never attested; λεύκαινον (*Od.* 12.172) 'they were making white' beside λευκός 'white', cf. Skt. *roca-*, Lith. *laũkas*, etc.; λευκόω is first attested in Pindar. -υνω derivatives from thematic stems do not appear at such an early date , but over a dozen are attested in Attic authors (ἀβρύνω/ἀβρός, ἀδρύνω/ἀδρός, ἀπαλύνω/ἀπαλός, κακύνω/κακός, λαμπρύνω/λαμπρός, λεπτύνω/λεπτός, μαλακύνω/μαλακός, ὁμαλύνω/ὁμαλός, πραΰνω/πρᾶος, σεμνύνω/σεμνός, σκληρύνω/σκληρός, σφοδρύνω/σφοδρός, φαιδρύνω/φαιδρός, etc.), and some are also used by Herodotus.

The -αινω and -υνω factitives which stand besides thematic stems represent only a small proportion of the denominative formations where these two suffixes appear. In order to consider the problem they pose, it will be necessary to take into account the other types of verbs which are parallel from a morphological point of view.

The -υνω class will be discussed first. From a derivational point of view denominative -υνω verbs fall into the three principal groups[33] indicated below:-

(1) –υνω verbs based on u-stem adjectives.
   e.g. Hom. βαρύνω 'I weigh down, I make heavy' beside βαρύς 'heavy'
   βαθύνω 'I deepen' beside βαθύς 'deep'
   ἰθύνω 'I steer, I straighten' beside ἰθύς 'straight'

(2) –υνω verbs based on s-stem nouns.
   e.g. Attic καλλύνω 'I beautify' beside κάλλος n. 'beauty'
   μηκύνω 'I lengthen' beside μῆκος n. 'length'

(3) –υνω verbs based on o-stem adjectives.
   e.g. Attic ἀπαλύνω 'I weaken, I make soft' beside ἀπαλός 'soft'
   λεπτύνω 'I make thin' beside λεπτός 'thin, meagre'

The above examples show that in the cases where the base-word is an adjective -υνω possesses a factitive value. The suffix clearly originated in the verbs of group (1), that is, in the formation of factitives from u-stem adjectives. This is proved not only by the phonological shape of the suffix, but also by the fact that groups (2) and (3) are hardly represented in Homer, but increase in size later on. The chief problem that is raised by the process of derivation from u-stems seen in group (1) -υνω verbs concerns the origin of the nasal suffix. Denominatives in -υω, the other class of early-attested derivatives from u-stem adjectives, do not possess a factitive value, e.g. Homeric ἰθύω 'I go straight, I press on, I am eager' beside the adjective ἰθύς 'straight, direct' and ἰθύνω 'I steer, I straighten'. Thus it appears that it is the nasal morph which confers the factitive value.

In the -αινω class the situation is more complicated. -αινω verbs are found besides three main types of nominal stem, and these three groups are illustrated below:-

(1) –αινω verbs beside n-stem adjectives and nouns.
   e.g. Hom. ἀφραίνω 'I am foolish' beside ἄφρων 'foolish, senseless'
   ποιμαίνω 'I am a shepherd' beside ποιμήν m. 'shepherd'
   ἀσθμαίνω 'I pant, I gasp' beside ἄσθμα n. 'panting'

(2) -αινω verbs beside adjectives in -ρο-, -ερο-, -αρο-, -αλεο-, -αλιμο-
   e.g. Hom. κυδαίνω 'I glorify' beside κυδρός, κυδάλιμος 'glorious'
   διαίνω 'I soak' beside διερός 'wet, fluid, swift'
   μιαίνω 'I stain' beside μιαρός 'foul, dirty'
   (κατ) αζαίνω 'I parch' beside ἀζαλέος 'parched, dry'

(3) -αινω verbs beside *o*-stem adjectives.

  e.g. Hom. λευκαίνω 'I make white' beside λευκός 'white'

  θερμαίνω 'I make warm' beside θερμός 'warm, hot'

  λειαίνω 'I make smooth' beside λεῖος 'smooth'

In the verbs of group (1) the suffix -αινω can be explained by the common Greek derivational process of adding the inherited denominative suffix *-ye-/-yo- to the bare nominal stem (e.g. ποιμαίνω < *poimn̥-yō). For group (2) a prehistoric *n*-stem nominal form has usually been reconstructed on the basis of the attested *r*- and *l*-stems.[34] These verbs feature prominently in Benveniste's *Origines de la formation des noms*, Chapter III,[35] as evidence for an IE *r-/l-/n*-stem alternation, but it should be noted that in many cases the Greek denominative in -αινω provides the only evidence for an *n*-stem alternant.[36] Group (3) can to some extent be explained via cognate nominal stems in *n-/r-/l*- (e.g. αὐαίνω from αὐονή or αὐαλέος rather than αὖος), but for several early attested verbs (e.g. Homeric λευκαίνω, λειαίνω, ξηραίνω) no such connection can be made.

In addition to the morphological problem presented by the verbs of group (3), there is a semantic problem which involves the -αινω class as a whole. The denominatives which stand beside an existing *n*-stem adjective or appellative, that is, those belonging to group (1), regularly mean 'I am *x*'.[37] For example, ποιμαίνω means 'I am a ποιμήν', ἀφραίνω means 'I am ἄφρων'. In this group there is no trace of the factitive sense[38] shown by λευκαίνω 'I make λευκός', ξηραίνω 'I make ξηρός', and most verbs of group (3). On the other hand, the verbs of group (2) where an *r-/l-/n*-stem alternation in the base-word has been postulated may all be interpreted as factitives to the existing adjectives; κυδαίνω means 'I make κυδρός/κυδάλιμος, I glorify', μιαίνω 'I make μιαρός, I stain, I pollute', and so on.

Accordingly, on the grounds of meaning we might expect groups (2) and (3) to have a common origin, and it becomes difficult to understand how they can represent the same basic process of derivation as group (1). In other words, we begin to suspect that a process of derivation by means of the suffix *-ye-/-yo- from *n*-stems is not the only source for -αινω, but that here, as in the

case of -υνω, the presence of a nasal is associated with factitive value.

The key to this problem lies in the -υνω verbs of group (1) – the derivatives from *u*-stems – and the -αινω verbs of group (2) – the verbs which stand besides adjectives in -ρο-, -ερο-, -αλεο-, etc. For in both groups, the adjectival formations with which the verbs are associated belong to so-called Caland systems. That is, they are all adjectives built with the sort of suffix which is removed and replaced by an *i*-suffix when they appear as the first member of a compound.

Cf. | κυδαίνω | simplex | κυδ-ρός | compound | κυδ-ι-άνειρα |
| διαίνω | | δι-ερός | | δι-ι-πετής |
| ἀρτύνω | | ἀρτ-ύς (Hesych.) | | ἀρτ-ί-πους |

The comparative evidence of Hittite here again helps to clarify the picture. In addition to the suffix -aḫḫ- which was mentioned above, Hittite also employs a suffix -nu- or -anu- to derive verbs of factitive value from adjectives of the Caland type:[39]

Cf. adj. *tep-u-* 'small, insignificant' → verb *tep-aw-aḫḫ-* 'to humiliate'

  nakk-i- 'heavy' → *nakk-iy-aḫḫ-* 'to make heavy, to treat as important'

  šupp-i- 'pure, holy' → *šupp-iy-aḫḫ-* 'to make pure, make holy'

and | *tep-u-* 'small' | → verb *tep-nu-* 'to make small' |
mi-u- 'soft'	→ *mi-nu-* 'to soften, to weaken'
palḫ-i- 'wide'	→ *palḫ-anu-* 'to widen'
ḫark-i- 'white'	→ *ḫarg-anu-* 'to make white'

-anu- appears to be a conditioned variant of -nu- as it regularly appears after two consonants, and indeed the vowel -a- may be purely the result of orthography.[40]

If the morphology of the Hittite factitives in -aḫḫ- is compared with that of the factitives in -nu-, it appears that whereas -aḫḫ- is regularly added after the adjective's suffix, when -nu- is employed

the adjective's suffix is removed and -nu- takes its place. On the basis of such Hittite evidence A. Nussbaum has argued[41] that the denominatives in -nu- represent the inherited type of factitives to Caland adjectives, since it is here that we find the substitution of one suffix for another which is the hallmark of Caland systems.[42]

From the outline of the Greek and Hittite facts which has just been given it can be seen that Greek -αινω/-υνω and Hittite -nu-/-anu- fill exactly the same morphological and functional slot in the derivational system of their respective languages: they build factitive verbs to a class of archaic adjectives with certain morphological peculiarities, the so-called Caland adjectives. There are also morphological grounds for believing that in Hittite the factitive formation in -nu-/-anu- represents an inherited category, and at least one Hittite verb of this type appears to continue an IE lexical item, cf. Hitt. tepnuzzi/tepu-, Skt. dabhnoti/dabhra-.[43] In other words, there is evidence that in the IE parent language there was a type of factitive formation which was peculiar to Caland adjectives, and which differed from, for example, the factitive formation to thematic stems. Accordingly, the Greek verbs in -αινω/-υνω which stand beside Caland adjectives must also be the *functional* reflexes of this IE type of factitive formation.

Is it possible to go beyond this functional equation, and explain the shape of the Greek suffixes by comparing them with the Hittite formation, and trace both back to a prototype in the parent language? At first sight there is none of the formal equivalence upon which such phonological reconstructions are usually based. However, in both languages the factitives contain a nasal which is unexpected in view of the shape of their base-words, and it was pointed out above how in the Greek -υνω verbs, at least, the factitive value is undoubtedly associated with the presence of the nasal.

If the Hittite derivational process is re-examined in the light of this observation, it appears possible to distinguish three slightly differing processes. These are illustrated below:-

(1) *Infixation* of -n-/-an- before a u-suffix.
   e.g. adj. *tep-u-* → verb *tep-n-u-*
        mi-u-   →   *mi-n-u-*

   park-u- →   *parg-an-u-*
   tašš-u- →   *taš-n-u / tašš-an-u-*

(2) *Substitution* of -nu-/-anu- for an adjectival *i*-suffix or Caland suffix of another type.
   e.g. adj. *hark-i-* → verb *harg-anu-*
        palh-i-   →   *palh-anu-*
        mekk-i-   →   *mak-nu-*
        danku-i-   →   *danku-nu-*
        dann-ara   →   *dann-anu-*

(3) *Addition* of -nu- to the adjectival suffix.
   e.g. adj. *mališk-u-* → verb *mališk-u-nu-*[44]

It is possible to explain this situation diachronically if the process of infixing a nasal before the suffix of a Caland adjective in -u- seen in type (1) is taken to represent the earliest stage. The process found in type (2) is basically the same: -n- is infixed into a parallel *u*-stem derivative, which could be supplied through the alternation of suffixes characteristic of the Caland system. But, because no adjective in -u- from these roots was in use in the language, such forms could be resegmented into root + suffix -nu- in the manner shown above. The final stage in the development is represented by type (3). Here -nu- is used as an independent suffix, and is added to the adjectival stem.

As in the case of the suffix -ahh-, the earliest Hittite process probably reflects the situation in the parent language. The process of infixing *-n- into roots + *-u- enlargement is undoubtedly archaic: it survives in relics in many IE languages, but is productive in none.[45] The one Hittite -nu- factitive which is proved by comparative evidence to continue an IE verb shows a process of infixation (*tepu-/tepnu-*).[46]

At this stage it is legitimate to ask: if Greek inherited a process of infixing a nasal into *u*-stem adjectives in order to derive factitive verbs, how might this process have developed within Greek? It is well known that in the case of some inherited types of deverbative present formation Greek built a nasal suffix out of an inherited

nasal infix. For instance, in a present such a λιμπάνω the inherited nasal infix (cf. Lat. *linquo*, Skt. *riṇakti*) is preserved, but an additional nasal suffix was created out of it within Greek. In the present κάμνω the suffix -νω is derived from an inherited nasal infix in a root which ended in a laryngeal (cf. Skt. *śamnīte*). The verbs in -νυμι are also a case in point. Formations such as στόρνυμι, which probably contains an inherited nasal infix in a root enlarged by *-u- (cf. Skt. *stṛṇomi*),[47] were resegmented, and the suffix -νυμι became productive in creating new presents, e.g. δείκ-νυμι, κεράν-νυμι. Where, however, the nasal was infixed into a nominal baseword, the Greek remodelling may have taken a slightly different course, as synchronic comparison with the existing adjective would allow the nasal to be identified as a verbal morpheme. I would suggest that in these cases the inherited nasal infix alone was transformed into a suffix.[48]

It is another common feature of Greek verbal morphology that a nasal suffix is often further extended by a second suffix *-ye-/-yo-; e.g. present κλίνω < *kli-n-yō (cf. perfect κέ-κλι-μαι), or πλῦνω < *plu-n-yō (cf. πέ-πλυ-μαι, πλῦ-τός, Skt. *plavate*, OCS *pluti*, etc.). Hence the nasal suffix which had been built out of the inherited nasal infix may then have been extended by *-ye-/-yo- to produce a complex suffix *-n-yō, or, when added to a *u*-stem, *-u-n-yō, the earlier form of -ύνω. Thus, for example, βαρύνω may ultimately continue an IE factitive *gʷrH-n-u- derived from the IE adjective *gʷrH-u- 'heavy' (cf. Gk βαρύς, Skt. *guru-*, Lat. *gravis*), the nasal infix having been transformed at a Proto-Greek stage into a suffix and then redetermined by the addition of a second denominative suffix *-yō.

If -ύνω may be explained in this way, is there any possibility of accounting for -αινω, whose function and distribution is so closely parallel, via the same sort of reconstruction? In this case a precise explanation is harder to find, but there can be little doubt that in origin it must be connected.

In addition to the facts of distribution already mentioned for -ύνω and -αινω, namely that in Homer -ύνω belongs with *u*-stems while -αινω belongs with Caland stems of other types (adjectives in -ρο-, -ερο-, -αρο-, -αλεο-, -αλιμο-), and some thematic adjectives, it should be pointed out that in a small group of verbs, composed exclusively of factitives, the suffixes behave as conditioned variants of each other; e.g. γλυκαίνω 'I sweeten' (not *γλυκύνω) beside γλυκύς 'sweet', and αἰσχύνω 'I disfigure, I dishonour' (not *αἰσχαίνω) beside αἰσχρός 'ugly, base'. As E. Fraenkel noted,[49] the principle governing this variation is that the same vowel in two successive syllables is avoided. The close connection between the two suffixes which allowed such substitutions suggests that -αινω might be explained via -ύνω. It is possible that -αινω first arose in cases such as the factitive beside κυδρός, where *κυδύνω had to be avoided. However, -αινω is more likely to have arisen as a result of morphological, rather than phonological difficulties in the employment of -ύνω. When parallel *u*-stems could no longer be supplied beside the Caland adjectives in -ρο-, -αλεο- etc. in order to build a factitive verb (in other words, when the Caland system was no longer productive), the nasal suffix could not be added directly after -ρο- or -αλεο-, as these adjectival suffixes ended in a thematic vowel, and so the factitive formation in -οω would have been obligatory.[50] In order to preserve the characteristic Caland type of factitive, the adjectival suffix may have been deleted (in true Caland fashion) and replaced by the same suffix *-nyō that was *added* to *u*-stems, with the result that a variant suffix -αινω came into being.

The case of the -αινω and -ύνω verbs turns out to be very similar to that of the factitive -οω verbs. Provided that it is accepted that some morphological remodelling must have taken place within Greek, both classes may be related to IE prototypes.

If the reconstructions proposed above for the prehistory of all three verbal categories are correct at least in outline, it becomes possible to answer the question that was posed at the beginning of this article: how did doublets in -οω and -αινω, and -οω and -ύνω come to exist in Greek? It has been suggested that all these suffixes continue IE factitive formations, but that -αινω and -ύνω were not originally associated with thematic stems. In Hittite the factitive suffix -aḫḫ- appears to have been extended from thematic adjectives (type *newaḫḫ-* beside *newa-*) to adjectives of the Caland type (type *tepawaḫḫ-* beside *tepu-*). In order to explain the Greek -αινω and -ύνω derivatives from thematic stems it may be supposed that in Greek a levelling process operated in the opposite direc-

tion, and that it was the Caland type of factitive (built with suffix -υνω or -αινω) which was here extended to the other class of adjectival forms (namely thematic stems) where a factitive formation had been inherited from IE. -αινω must have been extended before -υνω to adjectives with a simple thematic stem because it was the form of the factitive nasal suffix which was employed in the case of Caland stems that ended in a thematic vowel (stems in -ρο-, -αλεο-, etc.). Thus λευκαίνω etc. is found already in Homer, but σεμνύνω etc. not until Herodotus and Attic authors.

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NOTES

1. The article is based upon the text of a paper which was presented before a meeting of the Philological Society at King's College, London, on 20 January 1978. Here I would like to express my gratitude to Professor A. Morpurgo Davies for her advice at all stages during the preparation of this article; to Dr. A. Nussbaum for making available to me his unpublished Harvard dissertation, *Caland's 'Law' and the Caland System* (Cambridge, Mass., 1976), and for bringing to my attention the unpublished dissertation by H. J. Koch (see n. 39 below); and to all scholars who offered criticisms and comments following the reading of my paper to the Philological Society.

2. Cf. κοινόω, κοινώσω, ἐκοίνωσα, κεκοίνωκα, κεκοίνωμαι, ἐκοινώθην and φιλέω, φιλήσω, ἐφίλησα, πεφίληκα, πεφίλημαι, ἐφιλήθην, etc.

3. λευκόω is attested, e.g. Pindar (ed. Snell) *I.* 3/4 87 (λευκωθείς), Xen. *Hell.* 2.4.25 (ἐλευκούντο), Pl. *Lg.* 785a (λελευκωμένῳ); λευκαίνω, e.g. *Od.* 12.172 (λεύκαινον), Eur. *I.A.* 156 (λευκαίνει); σεμνόω, e.g. Hdt. 1.95, 3.16 (σεμνούν); σεμνύνω, e.g. Hdt. 1.99 (ἐσέμνυνε), Ar. *Ran.* 1020 (σεμνυνόμενος), Eur. *I.A.* 996 (σεμνύνεται), Pl. *Phdr.* 244d (σεμνύνοντες).

4. Cf. E. Fraenkel, *Griechische Denominativa* (Göttingen 1906) [*Gr. Denom.*]. 67–114; K. Brugmann, *Griechische Grammatik* (4th ed. by A. Thumb, Munich 1913) [*Gr. Gr.*⁴], 357; K. Brugmann, *Grundriss der vergleichenden Grammatik der Indogermanischen Sprachen* (2nd ed., Strassburg, 1916) [*Grundriss²*], II.3, 206 and 227; J. Wackernagel, *Sprachliche Untersuchungen zu Homer* (Göttingen, 1916) [*Sprach. Untersuch.*], 282 ff.; E. Schwyzer, *Griechische Grammatik* I (Munich 1934) [*Gr. Gr.*], 726–728; P. Chantraine, *Morphologie historique du grec* (2nd ed., Paris, 1961), 252; E. Risch, *Wortbildung der homerischen Sprache* (2nd ed. Berlin, 1974), § 114a; J. Kuryłowicz, *PTJ* 28 (1970), 26–28 and *Metrik und Sprachgeschichte* (Warsaw, 1975), 20–21. However, the first point, namely that the -οω class is a Greek innovation, has only been accepted during the present century and it has been questioned again very recently by J. Dishington, *Lg* 52 (1976), 861 who attempts to revive an equation between the Greek -οω class and the 3rd weak class in Germanic that was originally proposed by H. Möller in 1880.

5. The 'instrumental' type of meaning in Homer is distinguished by Fraenkel, *Gr. Denom.*, 67 ff., Brugmann, *Gr. Gr.*⁴, 357–358, A. Debrunner, *Griechische Wortbildungslehre* (Heidelberg, 1917), §§ 198–199, Schwyzer, *Gr. Gr.*, 727, 3, Risch, *Wortbildung²*, § 114a.

6. This generalization covers all the cases in Homer where the exact meaning of the o-stem base-word is known. At first sight κακόω appears to be an exception. For whereas in some passages (e.g. *Od.* 16.212) the sense expected for a factitive based on the adjective κακός is found, the verb more often means 'to do wrong to, to treat badly' (e.g. *Od.* 4.754). However, this difference in semantic pattern is explained if two separate verbs are recognized: (1) κακόω 'I make bad' derived from the adjective κακός 'bad, cowardly', (2) κακόω 'I afflict with evil, I make affected by evil' derived from the frequently attested substantive κακόν n. 'evil, misfortune'.

7. The adjectival base-words are ἀϊστός, ἀλαός, ἅλιος, ἀμενηνός, γυιός, γυμνός, δοχμός, θοός, ἶσος, κακός, κνύζος, κυρτός, μοῦνος/μόνος, οἶος, ὁμός, ὁμοῖος, ὀρθός, περαῖος, πιστός, *σαός/σόος, σιφλός, χῆρος. In addition the adjective δήϊος probably represents the base-word of δηϊόων etc., and an o-stem adjective *ἰδνός 'bent' may be reconstructed as the base of ἰδνώθη, ἰδνωθείς.

8. A complete list of all the Homeric forms from -οω verbs is given in my unpublished dissertation, *Secondary Ablaut – The Development of a Regular Conjugation in Early Greek (-εω, -αω, -οω,-υω, -ιω Verbs)* (Oxford, 1979), Vol. II, 128 ff. This list is not reproduced here as the forms may easily be traced via the standard Homeric indices and concordances.

9. The perfect middle participle forms attested for κακόω are in line with the derivation suggested for this verb on semantic grounds in n. 6.

10. 13 are based on attested o-stem nouns: βρότος, ἔεδνα (n.pl.), θέειον, θριγκός, θυόν, κακόν, οἶνος, πύργος, ῥύπα (n.pl), στέφανος, τόρνος, χόλος, χύτλον and an o-stem *θέμος is probably to be reconstructed as the base of θέμωσε; 4 are based on feminine stems in -ā or -iā: κορυφή, πάχνη, γέφυρα, ῥίζα, and 2 on stems of other types: γόνυ/γουνός, σφήξ/σφηκός. The -οω derivatives from non-thematic stems obviously represent a secondary category which increases in size in post-Homeric Greek.

11. Cf. M. Lejeune, *Mémoires de Philologie Mycénienne*, Première Série (Paris, 1958), 228–230, and P. Chantraine, *SMEA* 3 (1967), 20.

12. As proposed by D. M. Jones, *Glotta* 37 (1958), 112 ff.; cf. A. Heubeck in *Proceedings of the Cambridge Colloquium on Mycenaean Studies* (ed. L. R. Palmer and J. Chadwick, Cambridge, 1966), 229, who, however, argues that *qe-qi-no-to* etc. and δινωτός are all derivatives from an otherwise unattested o-stem noun *gʷi-no- 'life, living'.

13. Brugmann, *Gr. Gr.*⁴, 357; cf. *Grundriss²* II. 3, 206.

14. That the Greek -ωτο- adjectives continue an IE type of secondary derivative from thematic stems has been argued by W. Meid, *IF* 62 (1956), 260ff. and *IF* 63 (1957), 1 ff. However, the comparative evidence is not very plentiful. Some of the forms cited by Brugmann and his contemporaries (e.g. Lat. *aegrōtus*) can no longer be accepted, as they are now known to represent hybrid Latin-Greek formations, cf. M. Leumann and J. B. Hofmann, *Lateinische Grammatik* I (2nd ed., Munich, 1977), 334 and 552.

15. Cf. A. Meillet in *Festschrift J. Schrijnen* (Nijmegen–Utrecht, 1929), 635 ff., and E. Benveniste, *Noms d'agent et noms d'action en indo-européen* (Paris, 1948), 164 ff.

16. In two of the three cases where an adjective in -ωτο- corresponding to a Homeric -οω verb is attested at an early date only a compound beginning with

privative ἀ- is found: ἀπύργωτον (*Od.* 11.264) beside πυργόω and ἀστεφανώτοισι (Sapph. 81(b), ed. Lobel and Page, Oxford, 1955) beside στεφανόω.

17. One of the objections raised by Fraenkel (*Gr. Denom.*, 109) against Brugmann's theory was that perfect middle participles in -ωμενο- would have merely duplicated the positive adjectives in -ωτο- in meaning. However, it has been pointed out above that there could have been a *morphological* reason for their creation, namely to complete pairs in ἀ ... το-/-μενο-. Fraenkel's other objections all arise from the fact that he did not recognize the existence of two subgroups within the -οω class, each with distinct derivational, semantic and morphological patterns.

18. Cf. P. Chantraine, *Histoire du parfait grec* (Paris, 1927), 55 ff., on the creation of perfect middles within Greek starting from participles in -μενο-.

19. *Sprach. Untersuch..* 287–290.

20. A *formal* model for the creation of long-vowel s-aorists beside a perfect middle with a long-vowel stem could also have been supplied by other denominative classes, cf. e.g. Homeric τίμησας beside τετίμηται.

21. Pluperfect forms are in fact more common than perfect forms among the finite reduplicated forms attested for verbs of the χολόω type in Homer. Wackernagel, op. cit., assumed that intransitive present middles (e.g. χολοῦμαι 'I am angry') were created before the s-aorists, but this assumption may not be necessary, since ἐβιώσαο was apparently created beside βιῶναι in the absence of a corresponding present stem.

22. *Gr. Gr.*[4], 358; cf. *Grundriss*[2], II. 3, 206 and 228. Brugmann's explanation involving the adjectives in -ωτο- has often been applied indiscriminately to -οω verbs of both types, whereas in fact he offered a separate explanation for the derivatives from adjectives.

23. Attested as an agricultural term meaning 'I plough up, I replough', e.g. νεωμένη, Hes. *Op.* 462.

24. Cf. E. Sturtevant, *A Comparative Grammar of the Hittite Language* (2nd ed., New Haven, 1951), §224.

25. *TPS* 1971 [1973], 51–93.

26. *TPS* 1971 [1973], 54–55.

27. Cf. N. Oettinger, *Die Stammbildung des hethitischen Verbums* (Nürnberg, 1979) [*Stammbildung*], 240 and 455, on the Hittite evidence

28. It is not only the scarcity of -οω present stem forms, but also the frequency of contractions and diectasis among those forms which are attested in Homer that suggests the present stem is a late creation; cf. K. Meister, *Die homerische Kunstsprache* (Leipzig, 1921), 86–87, and Schwyzer, *Gr. Gr.*, 727, 3. Schwyzer also takes the lack of forms built with the iterative suffix -σκ- as a sign that the presents in -οω were created at a much later date than those in -εω and -αω.

29. Cf. H. Kronasser, *Etymologie der hethitischen Sprache* (Wiesbaden, 1966), 426 ff., Watkins, *TPS* 1971 [1973], 85 ftn. 35, Oettinger, *Stammbildung*, 42 and 455.

30. In other words, formal confusion between the two types of present stem might have occurred after the loss of intervocalic yod, but not before. Accordingly, there would have been no formal grounds for remodelling the inherited factitive presents until around the Mycenaean period or later.

31. A case such as κακόω where two verbs derived from a homonymous noun and adjective existed side by side (cf. n. 6 above) would have favoured an analogical extension of this sort (I am indebted to Professor C. J. Ruijgh for this observation).

32. If this explanation is correct, factitive presents in *-ā-* may have co-existed

for a time with aorists in -ωσα. Some evidence for such a stage is possibly preserved in Mycenaean. H. H. Hock has suggested in his unpublished Yale dissertation, *The So-called Aeolic Inflection of the Greek Contract Verbs* (New Haven, 1971), 333 ff., that the puzzling Mycenaean verbal forms te-re-ja (PY Eb 149) and te-re-ja-e (PY Eb 149, 495, Ep 613) may represent the same denominative as later Greek τελειόω (Hdt. +) 'I make perfect, I complete' based on the adjective τέλειος 'complete, perfect'. While this proposal provides a solution to the problems posed by the formal shape of the Mycenaean verb, it cannot be proved that its value is factitive. However, if Hock is right, in this case the reflex of an inherited type *-ā-* factitive present is attested at the same date as a remodelled sigmatic stem in -ō- (*e-re-u-te-ro-se*).

33. This classification ignores some patterns of derivation which are only represented by one or two examples, e.g. ὀτρύνω 'I stir up, I urge on' besides ὀτραλέως 'quickly, readily' and δηθύνω 'I delay, I tarry' besides δηθά 'for a long time'.

34. Cf. Fraenkel, *Gr. Denom.*, 10 ff.

35. E. Benveniste, *Origines de la formation des noms en indo-européen* (Paris, 1935), 45 ff.

36. In addition, many of the -αινω verbs quoted for the purposes of reconstruction by Benveniste do not occur until late Greek authors, e.g. εἰδαίνομαι is used by Nicander, ἰκμαίνω by Nicander and Appollonius Rhodius.

37. -αινω derivatives from neuter n-stems nouns (e.g. Hom. ἀσθμαίνω, θαυμαίνω, πημαίνω) do not, of course, show the same sort of meaning as the derivatives from n-stem adjectives or appellatives. Such verbs sometimes possess a transitive value, e.g. ὀνομαίνω 'I name', πημαίνω 'I grieve, I do harm to', but the relationship of the derived verb to its base-word may be described by the formula 'I perform an action x' or 'I perform an action to do with x'. There is no question of a *factitive* relationship here.

38. εὐφραίνω means 'I make glad', but its sense corresponds to the active sense of the base-word εὔφρων 'cheering, making glad' found at e.g. *Il.* 3.246 (εὔφρων οἶνος).

39. The Hittite denominatives in -nu- have been studied recently in an unpublished Harvard dissertation by H. J. Koch, *I–E Denominative Verbs in -nu-* (Cambridge, Mass. 1973). I first learnt of the existence of this thesis from Dr. A. Nussbaum in May 1977, but I only obtained a copy of it, and learnt of its full contents after my paper had been presented to the Philological Society. On several points Dr. Koch and I had reached the same conclusions independently, and references to the relevant sections of his thesis are given in the footnotes below.

40. Cf. Koch, op. cit., 27–28.

41. In a letter dated 2 May 1977. This part of my paper has profited considerably from discussions with Dr. Nussbaum.

42. Other explanations for the distribution of these two denominative suffixes in Hittite have, of course, been offered: e.g. Benveniste's semantic explanation in *Corolla Linguistica* (*Festschrift Sommer*, Wiesbaden, 1955), 1–4. However, Oettinger, *Stammbildung*, 164, now states 'bilden von den Adjektiven des Althethitischen die u-Stämme und ui-Stämme ihre Faktitive nur auf -nu-, die -a- und -ant-Stämme dagegen auf -aḫḫ- (während die i-Stämme sich diesbezüglich den ui-Stämmen ausgeschlossen haben)'. Cf. also p. 245. Koch, op. cit., 29 ff. also argues that the distribution is governed by morphological factors, -nu- being used primarily to form derivatives from u-stems, -aḫḫ- from a-stems.

43. This equation is examined at length by Koch, op. cit., 39 ff., and he concludes that it is valid in spite of the semantic objections that have been raised against it.

44. There is only one clear example of this process involving an adjectival stem.

But a process which is identical from a formal point of view is also to be seen in derivatives from nouns such as *nuntar-nu-* 'to hasten' beside *nuntar* 'haste', or *naḫšar-nu-* 'to frighten' beside *naḫšar* 'fear'.

45. In the cases under discussion the process yields a series of denominative verbs, but from a formal point of view it is identical to the process which produced deverbative present stem formations such as Skt. *śṛṇoti* (< *ḱḷ-n-eu-ti*), if the traditional analysis of such presents is correct. The relationship between denominatives in *-nu-* and deverbatives in *-nu-* (both of which represent productive categories in Hittite) is a vexed question, but there is not space to consider the many problems which arise here. See Koch, op. cit., 32 ff.

46. Another IE verb of this type may be continued by Lat. *minuo* 'I diminish', Gk. μινύθω 'id.' A factitive *mi-nu-* could have been formed in the parent language by infixing a nasal into the *u*-stem adjective of which traces survive in the Greek comparative μείων (<μείϝων) 'smaller, less', cf. Myc. *me-u-jo, me-wi-jo*, and Toch. B *maiwe* 'small, young'; cf. K. Strunk, *Nasalpräsentien und Aoriste* (Heidelberg, 1967), 80 ff. In addition see now Oettinger, *Stammbildung*, 245, on the diachronic interpretation of the Hittite denominatives in *-nu-*: 'Der Stammausgang *-nu-* korrespondiert also im Hethischen mit den *u*-Stämmen. Synchron betrachtet werden die *nu*-Faktitive somit unter Ausstossung des Stammvokals *u* des Adjektivs gebildet, während sie diachron als Nasal-Infix-Präsentien mit letztem Radikal *u* zu betrachten sind.'

47. But it has been suggested recently that the Greek and Sanskrit verbs may represent independent innovations, cf. J. Narten, *Die Sprache* 14 (1968), 133, and W. Cowgill in *Evidence for Laryngeals* (ed. W. Winter, The Hague, 1965), 154 ff.

48. Koch, op. cit., 94, offers a very similar explanation for the morphology of the Greek *-υνω* verbs, which he also argues continue the same IE category as the Hittite factitives in *-nu-*. However, he arrives at this conclusion from a different starting point, namely the reconstruction of the IE derivational process, and the equation between Grk. θαρσύνω and Skt. *dhṛṣṇoti* (75 ff). I believe that the relationship between θαρσύνω and *dhṛṣṇoti* is somewhat more complicated than Koch will allow, as θαρσύνω is more likely to represent a later derivative from the *s*-stem noun θάρσος n. (cf. καλλύνω, μηκύνω, quoted above), which may have replaced the expected cognate *θρασύνω. The Greek class of *-υνω* factitives is not discussed by Koch at any stage.

49. *Gr. Denom.*, 36. ff. M. Durante, *AION* 8 (1968), 17 ff. has even attempted to formulate a Greek euphonic rule applying to nominal as well as verbal categories.

50. We are speaking of a very early stage when *-οω* (or its antecedent formation in *-ā-*) was confined to thematic stems, just as *-eH₂-* appears to have been in the parent language.

DIALECT CONSCIOUSNESS AND LITERARY LANGUAGE: AN EXAMPLE FROM ANCIENT GREEK

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THE literature of Classical Greece is of particular interest to us today, both because of its high quality as literature and because of the influence it has exercised on our own literature and culture. Part of our appreciation of this literature must, of course, be an appreciation of its language. This involves more than knowing the rules of morphology and syntax – we would also wish to gain some understanding of what stylistic effects various authors were seeking, and how their works sounded to contemporary audiences. As a means to this end, we might try to form some idea of the total linguistic repertoire available to an author and his audience, and then to place particular examples of language in it.

In the case of an ancient language, this task is particularly difficult, for there is no possibility of observing and questioning informants – any conclusions we draw must be based on written statements about language, and on written language itself. From written statements about language (from the Classical period, largely anecdotes) we learn that the Greeks were conscious of their cultural and linguistic unity as Greeks – to quote Herodotus (8.144), they were united by common race, common language, common religion and common customs. Non-Greeks, on the other hand, spoke 'barbarian', which was thought to sound like the twittering of birds.[1]   Within the common language, there were, as we might expect, regional differences in speech; it was possible to recognize another man's origin by his accent, and to produce imitations of other dialects.[2]

The above could suggest a linguistic situation comparable to, e.g., that of modern England, where there are also clearly recognizable, but (to a large extent) mutually intelligible regional accents. The situation in Ancient Greece was quite different, however, for there was no standard language or 'prestige' dialect serv-