

## Variation with intrusive *t* in Greek nominal stems

CATALIN ANGHELINA, Columbus/Ohio

Ancient Greek shows various nominal *t*-stems, which are not of PIE date.<sup>1</sup> This means that *t* in such words is a Greek internal matter. Among these *t*-stems one can notice that, for some, the insertion is historical and can be traced back from the texts or epigraphic evidence we have, whereas for others we cannot do this, because the *t*-insertion occurred in prehistoric times, in Common Greek, and, therefore, there is no way one could find a form of such a stem before *t* entered its paradigm. Some examples illustrating this would be, on one hand, κέρας ‘horn’, which appears both as a *t*-stem and an *t*-less one, e.g., the genitive singular displays both κέρατος and κέραος,<sup>2</sup> and, on the other hand, ὄνομα, ὀνόματος = ‘name’, for which one cannot find in any of the Greek dialects a *t*-less stem, although the word was not a *t*-stem in PIE: cf. Skt. *nāma*, *nāmnas*, Lat. *nomen*, *nominis* etc.

The objectives of the present study are twofold. On one hand, to trace the historical entry of *t* in some of the Greek *t*-stem nouns,<sup>3</sup> and to figure out when and in what dialects this process took place. On the other hand, the study also tries to follow the

---

I would like to thank Professor Brian Joseph from the Department of Linguistics at The Ohio-State University, who encouraged me to take up this topic for my doctoral dissertation. His scientific advice and intellectual support proved to be of invaluable help in writing that thesis, of which this paper is an important part. It goes without saying that all the scientific errors in this paper belong entirely to me.

<sup>1</sup> *T*-stems are not very well represented in PIE; cf. Nussbaum (2004), Beekes (1995:178).

<sup>2</sup> Κέραος is the Ionic form. In Attic there is, next to κέρατος, another form κέρως, which is the result of the contraction of the Ionic (-Attic) form.

<sup>3</sup> As shown below, there are many other *t*-stems in Greek, for which there are no historical records of a stage when *t* was not present in their paradigms. They are not, therefore, the object of this study.

way the *t*-stems coexisted with the *t*-less stems in various dialects.

Given the considerations from above we can now divide the Greek *t*-stems into two main classes:<sup>4</sup>

A. Words for which we cannot determine the point in time when the insertion of *t* took place:

1. Participles and other words in -ων, -οντος or -ας, -αντος:

a. -ντ-participles: present, aorist: type φέρων, φέροντος = Skt. *bhāran*, *bhāratas*; λύσας, λύσαντος.

b. Words in -ων, οντος: λέων, λέοντος (but fem. λεαίνα < \*/lew̥nyh<sub>2</sub>/), δράκων, οντος; ὄδους, οντος; γέρων, οντος, ἄρχων, οντος, etc. Some of these forms are considered to be participial forms:<sup>5</sup>

c. Words in -ας, -αντος: ἐλέφας, αντος, Ἄτλας, αντος; some of them are thought to be participial constructions, e.g., πολύτλας, αντος = 'much-enduring'.

2. Greek neuter words in -μα < \*/-m̥h/: ὄνομα, ὀνόματος (see above).

3. Words ending in -εις < \*/-wents/, -εσσα < \*/-w̥ntya/, -εν < \*/-went/. The suffix -Fεντ- corresponds to Indo-Iranian -vant- (cf. Skt. *ásnavant-* 'having horses'): ἄστερόεις, χαρίεις etc.

4. Words with the abstract noun suffix -της, -τητος (Doric -τας) < PIE \*/-tāt-/; cf. Gk. ὀλότης 'wholeness' = Skt. *sarva-tāt* = Av. *haurvatāt*.

5. Greek words, sometimes with dubious etymology, about which we cannot say when or how they got *t* in their paradigms: δαίς, δαιτός; λίς, λιτός etc.

6. The word for 'head' κάρα, which displays in the oblique cases dental themes: κάρηατ-, κρηητ-. This occurs only in Homeric poetry and may be an artificial creation of the epic dialect. The other form of the PIE root for this word, κρᾶτ-/κρηητ-,

<sup>4</sup> In some of these cases *t* is of PIE date.

<sup>5</sup> Cf. Chantraine (1968), Perotti (1984:1-7).

also displays only the *t*-theme and, therefore, is excluded from the present research.<sup>6</sup>

7. The perfect active participle, e.g., εἰδώς, ότος, which is *t*-less only in Mycenaean. Since it is only in Mycenaean where it does not have a *t*-stem, this participle needs a separate treatment, which is to be taken up elsewhere.<sup>7</sup>

B. i) Words for which we can follow the insertion of *t* in their paradigms, and, thus, witness the allomorphic variation between the stems.

ii) Words that may have originally been *t*-stems, but switched to *s*-stems, and, therefore, present the same allomorphic variation as the nouns from i (see below).

Thus, the study excludes from the start as object of the analysis the *t*-stems which are not in allomorphic variation with the *t*-less stems. Consequently, it addresses only the words in the B-category. These are the following: γέρας ‘gift’, γήρας ‘old age’, δέπας ‘cup’, δέρας ‘skin’, κέρας ‘horn’, κνέφας ‘cloud’, κρέας ‘meat’, σέλας ‘brightness’, τέρας ‘monster’, χάρις ‘grace’, γόνυ ‘knee’, δόρυ ‘spear’, γέλως ‘laugh’, έρωσ ‘love’, ιδρώς ‘sweat’, φῶς ‘light’, χρώς ‘skin’.

Before beginning the actual analysis of these words, various methodological and theoretical aspects of this work need to be discussed.

### *Methodology and Objectives*

In order to study the B-category words, it was necessary, as a first step, to establish as exhaustive a list as possible of the relevant forms in all the Greek dialects, including Mycenaean. Buck & Petersen (1945) is the tool used to find out these *t*-stems.

<sup>6</sup> Nussbaum (1986: 54–5, 171–81).

<sup>7</sup> Anghelina (2007). For all the Mycenaean forms in this paper, see Aura Jorro (1985–93).

The next step, which actually makes up the core of this research, is, on one hand, to see when *t* enters the paradigm of these nouns, and, on the other, to analyze how the *t*-stems coexist with the *t*-less stems. For this, I use all the forms found in both the Greek literature and inscriptions. Each word is treated separately. Basically, what I do here is to extract from the *Liddell-Scott Lexicon* and the *TLG*<sup>8</sup> all the relevant forms of the words in question, and see, on one hand, when and where (what author and dialect) the *t*-stems occurred for the first time and, on the other, when it is the case,<sup>9</sup> when and where the *t*-less forms occurred. For the *t*-stems then I determine, to the extent possible, whether the first appearance of such a *t*-stem in a certain dialect is a matter of borrowing or represents just a phenomenon which belongs to that particular dialect. In other words, the fact that there might be other dialects in which this stem can be found could be either the result of a common heritage from a previous mother-dialect or a matter of borrowing of some sort.<sup>10</sup> For this purpose it is important to see what happens in all dialects. A form appearing in dialects A and B could have well appeared at a time before these dialects split up, that is to say in a putative proto A-B dialect. For example, if a *t*-stem can be found both in Ionic and Attic then the default conclusion that the comparative method gives is that the stem appeared by the time of the Ionic-Attic unity, unless we can find some proof that the form was a borrowed one from one dialect into another.

I should bring up here the issue regarding the accuracy of the data the *TLG* provides us with. Sometimes a word is listed as belonging to a certain author, but that author is quoted only by other later authors. The best known case is that of the Greek philosophers mentioned by Diogenes Laertios. In these cases there is no *verbatim* quotation. These later authors present in their own words their predecessors' ideas. Such information

---

<sup>8</sup> *Thesaurus Linguae Graecae*.

<sup>9</sup> When *t* is an archaism; see below.

<sup>10</sup> A literary borrowing is not excluded.

cannot be trusted as representing what the earlier authors really said. Consequently, I avoided to making use of it.

An important step of this research is to see how the parallelism between forms evolved with time in respect to each other. I try to see whether one form became more predominant or not, and, at the same time, establish what happened to the old forms, that is to say whether they were lost immediately or they continued to exist in parallel with the new forms. In principle, there is no limit to the period of time which can be analyzed. To simplify matters, I follow a period of time which begins with Homer, as the earliest literary source, and continues throughout the Hellenistic age. Nevertheless, where possible and necessary, I draw data from periods that go beyond this. I do not neglect, for instance, Mycenaean, in which some of these words can be found as well. The data is eventually set in tables highlighting the time, place or the center of spreading. Then I try, if possible, to draw some general conclusions about this morphological change, namely whether this is an issue which pertains to a specific dialect (or mother-dialect) or a matter of independent innovations in several dialects. I also try to establish whether the spreading of this morphological change started off with a certain case and then affected others. This inquiry is not trivial since the claim has been made that the Greek *t* in neuter nouns in *-mn̄* (type *ὄνομα, ὀνόματος* < \*/h<sub>1</sub>nom̄) spread by resegmentation from the ablatival suffix *-tos*, first to the genitive and then to the other cases.<sup>11</sup>

### *T-stems as innovation in Greek*

The process we are dealing with in this research is a morphological change which affects certain words in Ancient Greek: a *t*-insertion in words which previously were not *t*-stems. The most important fact is that the *t*-less stems continued to exist in

<sup>11</sup> Represented in Sanskrit in adverbs like *ta-tāh*. The Greek adverbs *ἐντός, ἐκτός* have the same suffix; cf. Oettinger (1982:233–245).

parallel in certain dialects. For example, a word like κέρας (cf. Skt. *śiras*) has the 'older' genitive κέραος < \*/kerasos/ or even κέρως, which is the normal result of the inflection of a consonantal *s*-stem, whereas the 'younger' form is κέρατος, which is the genitive of a *t*-stem κέρατ-.<sup>12</sup> One can see that such an insertion was achieved as means of 'regularizing' the paradigms, which tended to show fairly radical paradigm-internal allomorphy because of the various contractions which took place between the vowels of the stem and the ones of the endings. The Attic κέρως<sup>13</sup> would be a good example in this respect. From all the words which the present work takes into consideration κέρας (< \*/kerh<sub>2</sub>s/) = Skt. *śiras*- (< \*/kṛh<sub>2</sub>os/) 'horn' and κρέας = Skt. *kravis*- (< \*/kreh<sub>2</sub>s/) 'meat' are the only ones for which we can assert with certainty that their PIE form was a *t*-less one. The IE comparative perspective, however, was not something to take advantage of for the ancient grammarians. It would be then interesting to see, before the beginning of the actual research, what these grammarians believed about this morphological change. The most important information we have about this belongs to the grammarian Aelius Herodianus, in the 2<sup>nd</sup> century A.D., who asserts in his work Περὶ κλισέως ὀνομάτων that the nouns that are ending in Greek in *-as* have *t* in the paradigms only in Attic, not in Ionic. We can see in this account that the Greek grammarians had a good knowledge about the dialects of Greek, being sensitive to the dialectal differences. Their interpretation of the facts, however, lacked the sense of historicity given by the comparative perspective. Let us see then what Herodianus has to say about the existence of the *t*-stems:<sup>14</sup>

<sup>12</sup> See Nussbaum (1986: 152–5).

<sup>13</sup> α+ο→ω in Attic is a result of the so called 'Attic contraction'.

<sup>14</sup> Περὶ κλισέως ὀνομάτων (3.2.772); the same opinions are found in the 4–5<sup>th</sup> century AD grammarian Choeroboscos (citing Herodianus), *Scholia in Theodosii Alexandrini*, 1.353.

... ἴστέον δὲ ὅτι, ὡς εἴρηται, πάντα τὰ εἰς -ας λήγοντα οὐδέτερα διὰ τοῦ -τος κλίνεται οἷον γέρας γέρατος, δέρας δέρατος, κέρας κέρατος, κρέας κρέατος. καὶ ἐπειδὴ τὰ εἰς -ας λήγοντα οὐδέτερα πέφυκε πολλάκις γίνεσθαι καὶ εἰς -ος οἷον δέρας δέρος, κῶας κῶος, γήρας γήρος, τὰ δὲ εἰς -ος οὐδέτερα διὰ καθαροῦ τοῦ -ος κλίνεται οἷον βέλος βέλεος, τεῖχος τείχεος, εἰκότως καὶ ταῦτα τὰ εἰς -ας οὐδέτερα ἔσχεν ἀφορμὴν ὡς γινόμενα καὶ εἰς -ος τοῦ ἔχειν διὰ καθαροῦ τοῦ -ος τὴν γενικὴν, καὶ τούτου χάριν ἀποβάλλουσι τὸ -τ οἱ Ἴωνες οἷον κρέατος κρέαος, γήρατος γήραος, κέρατος κέραος· καὶ λοιπὸν οἱ Ἀττικοὶ συναίρουσι τὸ -α καὶ -ο εἰς -ω καὶ λέγουσι τοῦ κρέως, τοῦ γήρως καὶ δέρως βαρυτόνως.

Translation: '...it is to be known that, as they say, all the neuters ending in *-as* are declined with *-tos* like γέρας γέρατος, δέρας δέρατος, κέρας κέρατος, κρέας κρέατος. And since the neuters ending in *-as* often become in *-os* like δέρας δέρος, κῶας κῶος, γήρας γήρος, and the neuters in *-os* decline with pure *-os*, like βέλος βέλεος, τεῖχος τείχεος, it is likely that these neuters in *-as* had their beginning in the ones whose nature is determined by a pure *-os*, and, because of this the Ionians drop *t* as in κρέατος - κρέαος, γήρατος - γήραος, κέρατος - κέραος. And the ones in Attica contract α + ο into ω and pronounce barytonically κρέως, γήρως, δέρως...'<sup>15</sup>

In the terminology of modern historical linguistics Herodianus raises a well-known issue: given two forms of the same word in the same language, which one is the innovation and which one the archaism? This formulation is equivalent to seeing which form is older and, consequently, belongs to an older stage of the language. In our case, what Herodianus says is that some of the *t*-forms, namely those of the neuters with the nominative in *-as*, represent an older aspect of Greek and, therefore, in modern terminology, they are archaisms.

<sup>15</sup> Since I could not find any translation of this work, the translation belongs entirely to me.

As we can see, Herodianus saw the facts in a reversed way. He believed that for all the neuters with the nominative in *-as* the ‘original’ stems had *t*, whereas the Ionic forms dropped it. Herodianus’s account is important because he tells how people from different dialects have different preferences in their speech. From this perspective, I also try to see whether Herodianus’ testimony may have some truth in it. As strange as it may seem, his opinions are not singular. In modern times the idea was taken up again by Benveniste. This sets the tone for the following.

*Could dialectal t be an archaism from Common Greek?*

This paper has started from the premise that, in the stems from above, *t* is a dialectal innovation. This means that these stems were *t*-less in Common Greek and then, for some reason, *t* entered their paradigms in some dialects. We must now consider whether the ‘reverse’ situation is possible, namely whether *t* could be an archaism belonging to Common Greek, but not to PIE. The *t*-less paradigm could have been a dialectal later creation, most likely, as we shall see, by analogy.

In a brilliant study, Benveniste (1935:34–5) explored this latter possibility.<sup>16</sup> According to him, the neuter stems ending in *-as* in Greek are former heteroclitic stems ending in *-r*, which displayed in their paradigms the PIE alternation *r/n* between the nominative and the oblique cases. In Greek we can still see this pattern in words like ἦπαρ, ἦπατος where the original PIE nominative form was *\*/yāk<sup>w</sup>ṛ/*. The rest of the paradigm was determined by this alternation: the genitive, for example, would have been *\*/yak<sup>w</sup>ṛ(t)os/* > Gk. ἦπατος, Skt. *yaknás*, Lat. *iecinis*. The Greek paradigm is probably analogical to the one for the stems in *-mḥ* (type ὄνομα, ὄνόματος). In addition, the inherited PIE alternation *r/n* lies at the heart of the Greek suffix

<sup>16</sup> Schwyzler (1938:514 n.6) is skeptical, considering that Benveniste went too far with his speculations.



-at-, where *a* is the outcome of *η*. This suffix ended up by being used as a unit, analogically, in words like γόνυ, γούνατος.

Benveniste's main argument regarding this archaic *t* is the existence in Greek of traces of the old alternation *r/n*. A word like γέρας would have had its original form \*/gerar/ and, consequently, its genitive would have been γέρατος, behaving exactly like ἦπαρ, ἦπατος. The heteroklisie would be shown by the presence of *r* or *n* in words derived from the same root, e.g., on one side, γεραρός, γεραίρω < \*/geraryō/ and, on the other side, γεραίνω or γέρων. Benveniste considers that all the neuters in -as in Greek are actually the result of this passage from former -ar to -as stems, with the exception of κρέας and κέρας. Τέρας has a doublet τέλωρ < \*/terōr/, which, in turn, might have coexisted with an ablaut variant \*/terar/, in the way Greek has the doublet τέκμαρ-τέκμωρ; the genitive τέρατος, then, would reflect the older form, which had the alternation *r/n*. Another word of such sort could be σέβας. There is an adjective in Greek σοβαρός, which Benveniste connects to \*/sebar/. The adjective σεμνός < \*/sebnos/ would, again, reflect a former heteroclitic stem. Ψέφας shows an older \*/psephar/ attested in ψεφαρός. Πείρας, on the other hand, does have a historical variant πείραρ, and the alternation is clearly seen in the verb περαίνω < \*/peranyō/. Δέμας must have had a doublet \*/demar/, which is still recognizable in Germanic: Old Norse *timr*, Old English *timbr(i)an* = 'construction wood', etc; on the other hand, Greek itself has δέμνιον = 'bed', which would show the same alternation.

Benveniste also shows the fact that the themes in -r are not stable because of their irregular paradigm. This fact is shown by examples where Greek has doublets for the themes in -r: μῆχος-μῆχαρ; πῖος-πῖαρ, etc. These doublets are themes in -es- of the type γένος. The neuters in -as themselves can also display double paradigms, e.g., τέρεος (cf. τέραος), κρέους (cf. κρέως) etc.

These are, in short, the considerations Benveniste made about the origins of the neuters in -as. Nevertheless, he did not get into

more detail and explanation about words, where *t* is clearly not an archaism, but an innovation. In other words, he did not address the question regarding the way the *t*-less stems became *t*-stems in some dialects and whether this was a total and overnight replacement or not. This is not a minor issue, since in some of the words described by Benveniste the *t*-insertion seems to have occurred in Common Greek, e.g., for ἦπαρ, ἦπατος, whereas for others we can find a clear allomorphic variation in historical dialects, e.g., for τέρας we have two genitives attested, τέρας and τέρατος. Herodianus, on the other hand, provides us with a solution here: the *t*-less stems appeared as a consequence of dropping *t* from their paradigms. Is it so? And, if this is the case, what was the mechanism of dropping?

Let us suppose that Herodianus was right and *t* was intervocalically dropped in Ionic. Since *t*, in general, was not dropped in this position in any of the Greek dialects (including Ionic), the mechanism of this process is not a phonological one. The only possibility is that *t* was dropped through an analogical process. The analogy that could have worked here is the one with the stems which did not have originally *t*, namely with words like κέρας κρέας, etc. These stems had the original genitive \*/kreasos/ > κρέας, \*/kerasos/ > κέρας. The analogy based on the equation τέρας-τέρατος vs. κρέας-κρέας created a new genitive for the type τέρας, namely τέρατος with the dropping of *t*.<sup>17</sup> The same equation could have worked in a different way in Attic: it was the archaic type τέρατος, which prevailed.<sup>18</sup>

I will take a closer look at this opinion and see whether I can judge its validity or not. In other words, I try to see whether the allomorphic variation could tell us whether *t* is an archaism or an innovation. Is it the case that the “archaic” *t* seems to show

<sup>17</sup> The Aeolic forms like τέρεος are not very helpful, because they only show the passage to the declension type γένος. This process could be very old since we have it in both Ionic and Aeolic.

<sup>18</sup> Our research shows that this happened late in Attic.

up first in the words which originally had it, as Benveniste argued? Or do these words behave in the same way as the others, the *t*-less stems?

Before getting into the actual analysis of the words mentioned above, I need to say that there are many other neuter nouns in *-as* in Greek, which I do not take into account. The reason for this is that they do not display at any time, in Greek, a *t*-stem. These words are: δέμας, σέβας, ούδας, κτέρας, σκέπας, ἔρας, ψέφας, σφέλας, κῶας, βρέτας, λέπας, λίπας, κλέπας, κλέτας. However, it would be interesting to see for these words what other dialectal forms are attested.

- Βρέτας ‘wooden image of a god’ appears in several forms, being declined like an *-os* neuter: the dative βρέτει (A.Eu.259), the nominative/accusative plural βρέτεα (A.Supp. 463), βρέτη (A.Th.95), the genitive plural βρετέων (A.Th.97), the dative plural βρετάεσσι (Nic.Fr.74.68).

- Δέμας ‘body’ is found only once in an oblique case, the dative δέμαϊ (Pi.Pae.6.80), that is to say in an author whose dialect relies on Doric.

- Ἔρας is a word that does not exist as such, but it can be met in the derivative in *-no-* ἔραυνός ‘lovely’.

- Κλέπας ‘wet’ is met in no other forms.

- Κλέτας ‘slope’ displays no other forms as well.

- Κτέρας ‘funeral gifts’ is treated as an *-os* neuter as well: κτέρεα is the nominative/accusative plural in Homer (α 291, β 222, Ω 38) and Moschos (4.33); the genitive plural is κτερέων (ε 311), the dative plural κτερέεσσι (A.R.1.254).

- Κῶας ‘fleece’ is treated like the *-os* neuters: κῶεα (I. 661, ψ 180), the nominative/ accusative plural; the dative plural κῶεσι (γ 38, etc).

- Λέπας ‘rock’ is used only in nominative/accusative singular and, therefore, is not relevant.

- Λίπας ‘fat’ has the genitive singular (Aret.CA.1.1)<sup>19</sup> λίπαος and the dative singular λίπαϊ (Aret.CA.1.1).

---

<sup>19</sup> Aretaeus Medicus (2<sup>nd</sup> century A.D.).

- Οὔδας ‘earth’ displays the genitive οὔδεος in Homer (M 448, ι 242) and the dative οὔδει in Homer (Ω 527; E 734) or οὔδει (Ψ 283, *h. Merc.*284)
- Σέβας ‘reverence’ has the nominative plural σέβη (A.*Supp.*755) as if it were from σέβος.
- Σκέπας ‘shelter’ has the genitive σκέπαος (Arat.857), the nominative/accusative plural σκέπα (Hes.*Op.*532).
- Σφέλας ‘footstool’ has the accusative plural σφέλα (ρ 231), the dative σφέλαϊ (A.R.3.1159).
- Ψέφας ‘darkness’ has the genitive ψέφαος (Pi.*Fr.*324).

The conclusion that can be drawn from these words is that they are treated as *s*-stems (neuters in *-as* or *-os*) in most of the dialects.

We can begin now our research about the words which present allomorphic variation between the *s*-stems and *t*-stems. The words are analyzed in orderly fashion, according to their endings.

### *Intrusive t in Greek stems*

#### 1) Γέρας

There are no indications of a *t*-stem for this word,<sup>20</sup> except for the one mentioned in the work of Herodianus cited above.<sup>21</sup>

The forms are exposed below.

Γέρα, with short α by apocope, as either nominative or accusative plural: B 237, I 334, δ 66; A. *Pr.* 82; S.*OC.*1396; Th.1.25.4.2; Pl. *Resp.* 414a4, Ph. *Mos.* 1.321.1 (1<sup>st</sup> century B.C.); Plu. *Sert.* 14.4.4 (1<sup>st</sup> century A.D.) etc. E. *Ph.* 874 uses the form with *ā*.

Γεράων: Hes.*Th.*393, 396; *h. Cer.*311; Theoc. 22. 223 (4<sup>th</sup> century B.C.). A contracted form γερώων appears in Th. 3.58.5.5.

<sup>20</sup> The nominative plural γέρα is still in use today.

<sup>21</sup> Its occurrence in IG 14.1389 i29 (2<sup>nd</sup> century A.D.), γέρατα, is based on conjecture. The inscription shows only γέραα clearly.

The Attic contracted genitive singular γέρως: X. *Agas* 1.5.8 (5<sup>th</sup> century B.C.).

The dative plural has several forms: the Aeolic γεράεσσι (Hes. *Th.* 449; Theoc. 17.109); γέρασι (Th. 1.13.1.4).

A different form of the root in oblique cases appears in Ionic: nom./acc.pl. γέρρα in Hdt. 2.168, 3.142 etc., or in *SIG* 1037 (from Miletus around 300 B.C.); the contracted form γέρη in *SIG* 1025 (300 B.C., Cos); γερέων in D.H. *AR* 1.48.310 (1<sup>st</sup> century B.C.)

Conclusions:

a) Γέρας is, according to Benveniste's theory, a word that was originally an *r/n* stem, with *r* in the nominative; in this view, *t* would be an archaism.

b) Γέρας appears in the overwhelming majority of occurrences as an *s*-stem, in all dialects, including Attic, until very late.

c) The only reference we have for a *t*-stem is found in Herodianus, in the 2<sup>nd</sup> century A.D. Benveniste's theory is not very well supported by the data. If we admit it, then it can be concluded that the archaic declension with *t* was very early replaced by the one that used the *s*-stem.

## 2) Γῆρας

This is a word which, like γέρας, displays most of the time the *s*-stem. In Homer we find the datives γῆραϊ (Γ 150, E 153, etc.) and γῆρα (λ 136). For the latter we cannot say whether it was contracted or not; the ancient grammarians said it had  $\bar{a}$ .<sup>22</sup> If so, this was probably the result of the contraction of -αει, where the -ει would represent the old dative desinence.<sup>23</sup> The dative γῆραϊ also appears in Hesiod (*Op.* 705).

<sup>22</sup> It could be a scribal preference, especially if the scribes were from Attica: in γῆρα ὑπο λιπαρῶ ἀρημένον· ἀμφὶ δὲ λαοὶ, γῆρα could be scanned as γῆραϊ with elision before vowel. However, there are cases in Homer where similar words are scanned in two syllables, e.g., σέλαι (© 563).

<sup>23</sup> See Chantraine (1958:50).

Γήραος, the genitive singular, shows up throughout centuries in all dialects: X 60, Ω 137 etc., Hes. *Op.* 331, Archil. *IEG.* 188.2, Mimn. *IEG.* 2.6, Thgn. *Eleg.* 1.527, Pi. *Frg. Oaian.* 52a.1, Hdt. 3.14.40, Pl. *Resp.* 328e6 etc. A contracted form γήρωσ<sup>24</sup> occurs in many dialects: Sapph. *S.* 260.1, Thgn. *Eleg.* 1.174, Anacr. *Epigr.* 9.716.1, S. *Ant.* 608, E. *Alc.* 412, Pl. *Alc.* 1.122.b 2, etc. The largest number of contracted forms comes from Attic. Since these cannot be found in Homer, Chantraine believed that the contraction was Attic. However, the example in Sappho shows that the contraction might have occurred much earlier than Attic. It is true that Homer has examples (4) with the uncontracted genitive and in all those cases γήρωσ would have fitted the meter as well.<sup>25</sup> However, another Homeric contracted adjective, ἀγήρωσ (M 323, P 444, etc.) < \*/agērasos/,<sup>26</sup> seems to allow the possibility that the genitival form γήραος coexisted with γέρωσ after the contraction took place.<sup>27</sup> Sappho's case shows more than this, namely that the contraction in this word could have taken place earlier than Ionic-Attic.<sup>28</sup>

The dative γήραϊ (γήρα) appears as often as the genitive: Ibyc. *PMG* 6.6; Pi. *N.* 7.99; S. *Aj.* 507; Hdt. 6.24.7; Pl. *Resp.* 329c6. The list goes on down the centuries.

The adjective ἀγήραος < \*/agērasos/ can be found in the Homeric formula ἀγήραον ἡματα (ε 136, η 257, ψ 336). Other occurrences: Hes. *Th.* 305, 955; *h. Cer.* 260, Pi. *P.* 2.52. A *t*-stem, ἀγηράτω, appears in Simon. *Epigr.* 7.253.4 (6<sup>th</sup> century); S. *Fr.* 972.1; X. *Mem.* 4.3.13.9; Lys. *Or.* 279.5; Pl. *Ax.* 370 d3; Arist. *Cael.* 270b2. In spite of its later appearance, the adjective in *-to-* may be older than our data lets us see. A paral-

<sup>24</sup> The contraction is considered to be Attic by Chantraine (1968).

<sup>25</sup> ο 246: παντοίην φιλότητ' οὐδ' ἴκετο γήραος οὐδόν.

<sup>26</sup> It is unclear what the suffix is in this case: see Chantraine (1958:49). It is probable that the formation of this adjective belongs to the type of compounds described by Chantraine (1933:13–5): θριξ-εὐτριχος, οὐνξ-γαμψώνυχος, etc.; γήρας - \*/agērasos/ would fit then into this category.

<sup>27</sup> The claim can be made that the contracted form in Homer is Attic. However, the use of uncontracted forms in Plato shows that most likely we deal here with the coexistence of such forms.

<sup>28</sup> In Sappho's case, a dialect borrowing cannot be excluded.

lel example can be seen between ἀνίδρωτος and ἀνίδρως. The latter appears only late (2<sup>nd</sup> century A.D.), in Ruf. *Ren.Ves.*6.2 and Aret. *SD.*1.16, 2.7, whereas the former is already present in X. *Cyr.*2.1.29. This adjectival type, richly represented in Homer, e.g., ἀνούτητος, ἄβλητος etc., is old. It is not derived from *t*-stems, but represents PIE deverbative adjectives with the derivational suffix *-to-*.<sup>29</sup> In our case, the verb could have been γηράσκω. However, coincidentally or not, the appearance of the *-to-* adjective is paralleled by the insertion of *t* in the paradigm of γήρας. This happens for the first time in Isocrates (*Fr.* 21.2, γήρατι). After this, the *t*-stem is rarely found, and the *s*-stem appears instead, as shown above. The next occurrence of the *t*-stem is only in Herodianus, above. Consequently, whether ἀγήρατος reflects the appearance of the *t*-stem for this word is a matter which cannot be answered with certainty.

Conclusions:

a) Γήρας is a *t*-stem first in Isocrates (5<sup>th</sup> century B.C.); then it is mentioned only late (2<sup>nd</sup> century A.D.) by Herodianus. During all this time the *s*-stem continued to be used, Attic dialect included.

b) The adjectives ἀγήρατος and ἀγήραος also coexisted. The *t*-stem in this adjective appears first in Simonides of Keos,<sup>30</sup> and then quite often in Attic. The adjectives in *-to-*, however, represent an old PIE type.

c) Γήρας is a word whose etymology is related to γέρας.<sup>31</sup> Thus, this may be originally an 'r/n' word. However, there is no certainty about this fact, since it may have been built after γέρας without being heteroclitic. The only conclusion that can be

<sup>29</sup> See Chantraine (1933:302).

<sup>30</sup> Simonides' language is artificial and contains elements from all dialects. The basic features of his work are Doric, the dialect of the choral lyric. This may be due to the fact that the island of Keos was largely populated by people from Athens; cf. Palmer (1980:128) and Lesky (1956:184).

<sup>31</sup> See Chantraine (1968). The origin of the long vowel in the stem is still debated; it may be derived from the old athematic aorist ἐγήρα. Sanskrit has the short vowel in *jari-man* 'old age', but long vowel in the Vedic sigmatic aorist *jāri-ṣuh* (3<sup>rd</sup> pl.).

drawn is that this word displays a situation similar with γέρας and, given the etymological relation between them, it may have followed the same path with it. The adjective ἀγήρατος was probably already present in Common Greek. The word γήρας was used as an *s*-stem in all dialects. From Herodianus' point of view, it seems that in the 2<sup>nd</sup> century A.D. the *t*-stem was predominant in Attic, being an archaism in this dialect. However, our data shows that the *s*-stem continued to exist in parallel and, moreover, be predominant in most dialects, included Attic, at least in the Classical period.

### 3) Δέπας

This is a word which does not have a PIE etymology.<sup>32</sup> Therefore, it could not have an archaic *t* in its stem. The Homeric δέπας is *t*-less. Mycaenean shows with the nominative singular *di-pa* and the dual *di-pa-e* that, at this time, for this dialect, the *t*-stem was probably not present.<sup>33</sup>

The forms are presented below.

The dative singular δέπαί: Ψ 196, Ω 285, γ 41 (δέπα at κ 316). The dative plural δεπάεσσι: Α 471, Μ 311, γ 380 (δέπασσι: Ο 86). The genitive plural δεπάων: Η 480. The nominative/accusative plural δέπα: Τ 62, ο 466 etc. The genitive singular δέπας: Α.Ρ. 3.10.36.

This word displays almost always only the *s*-stem. The only time when the *t*-stem appears is in the work of a grammarian, Theodosius (4<sup>th</sup> century A.D.): δέπατος (Περὶ Γραμματικῆς 3.135.20). Theodosius, like Herodianus, says that Attic speakers used the form with *t*, whereas Ionic speakers used the *t*-less one. Another occurrence could be the one found in Thera (IG.12 (3).450a1), δέπατα, but the form is considered uncertain by Liddel-Scott. The inscription is dated around 500 B.C. by

<sup>32</sup> See Chantraine (1968).

<sup>33</sup> The form displays an alternative *i*, which occurs in Mycenaean with words of this kind. This might indicate a feature of the pre-Hellenic *sub-stratum*; see for this word, Ruijgh (1967:71; 1996:30).



Jeffery (1961:323), and the first two letters from this word are missing.

Conclusions:

Δέπας is a rare word, which has been mostly used as a *t*-less stem. It is not clear whether the Attic dialect used the *t*-stem, but it seems that most of the time the *s*-stem was the norm in all dialects. *T* is an innovation for this word.

#### 4) Δέρας

This word also does not seem to fit Benveniste's theory.<sup>34</sup> Δέρας is not used in Homer. It is a variant of δέρος, and it is considered to be a poetic and Ionic variant of δέρμα. The word displays both themes. The *s*-stem appears late (1<sup>st</sup> century B.C.): the contracted genitive δέρου<sup>35</sup> in D.S. 4.56. The genitive δέρατος appears late as well, in Herodianus (2<sup>nd</sup> century A.D.).

In sum, we can say about this rarely mentioned word that it continued to be a *s*-stem in Ionic. The *t*-stem appears very late, in Attic, in the 2<sup>nd</sup> century A.D.

#### 5) Κέρας

Κέρας does not have originally an *r/n* alternation in its structure (cf. Skt. *siras-*), and, therefore, its *t* is a matter of a later insertion. It does not have a *t*-stem until the 6<sup>th</sup> century B.C. with κέρατων (Pi.Fr.166). However, *t*-stems and *t*-less stems continue to coexist after that. The *t*-stem seems to appear more often than the *s*-stem: κέρατε (IG I<sup>2</sup>. 301.109) and κέρατα (ib.237. 59), both Attic; κέρατων (S.Tr. 519); κέρᾱτα (E.Bacch. 921);<sup>36</sup> κέρατι (X. Anab. 2.2.4), etc. As we can see, the

<sup>34</sup> Benveniste claims that all the words in *-as* except κρέας and κέρας were heteroclitic. However, δέρας is a PIE word, with no trace of the alternation *r/n*.

<sup>35</sup> This is from \*/deresos/, the type γένος.

<sup>36</sup> Κέρᾱτα <\*/kerasata/. This form was seen as analogical to οὔς <\*/owsos/, οὔ-ατ-ος <\*/owsatos/; cf. Nussbaum (1986:152). Under this hy-

examples are from Attic, which may lead to the conclusion that *t* first developed in this dialect. Unfortunately, there are few writers using it in other dialects, so we cannot draw a firm conclusion about the situation there. However, even in Attic, writers continue to use both the *s*-stem and the *t*-stem: κέρως (X. *Hell.* 1.7.29.7; Th.2.90.2.5); χρυσοκέρως (Pl. *Alc.*2.149c.2), which otherwise is a *t*-stem, χρυσοκέρατα (E.*Hel.* 382); the same adjective is an *s*-stem in a Doric inscription from Cos (χρυσοκέρω, SIG 398.24, 3<sup>rd</sup> century B.C.). Other forms: the analogical (after γένος) genitive singular κέρεος (Hdt. 6.111.2), dative singular κέρει (Hdt. 9.10.26), genitive plural κέρέων (Hdt.2.132.3), nominative/accusative plural κέρεα (Hdt.2.38.9). It is worth mentioning here the existence of two derived adjectives: ἀκέρατος (Pl.*Plt.*265c) and ἀκέρως (Pl.*Plt.*265b, etc.) < Gk. \*/akerasos/. The adjective in *-tos* is not derived from a verb, because there is no verb related to it. On the other hand, if the derivation had started from an *s*-stem, we would have had \*/akerastos/, as we have for the Homeric ἀγέραστος = ‘unrecompensed’ (A119). It seems then that there are two possibilities here: either this adjective reflects the stem /kerat-/ or we deal with an analogical formation after ἀγήρατος.

Homeric forms: the dative singular κέρᾱ (Λ 385), the genitive plural κέρᾱων (P 521), the dative plurals κέρᾱεσσι<sup>37</sup> (N 705) and κέρᾱσι (K 294, γ 384),<sup>38</sup> the nominative/accusative plural κέρᾱ (Δ 109, τ 211), with short α, probably analogically after the ending of the neuter nouns in the plural.<sup>39</sup> These forms continue to exist throughout centuries, but they are sporadic: κέρᾱεσσι (E. *Ion* 883); κέρᾱ (Th.1.50.2.1, 2.90.2.1,

---

pothesis the place of the accent is analogical, after the nominative. However, I would not exclude a metrical lengthening here.

<sup>37</sup> Also in the *Homeric Hymn to Hermes* (192), belonging to the 7<sup>th</sup> century.

<sup>38</sup> Κέρᾱσι has short *a*; whether this form comes from \*/keratsi/ or from the *s*-theme it cannot be decided. Since Homer does not use the *t*-theme, it is probable that the dative belongs to the *s*-theme paradigm. The case is similar to that of nouns in -μα. However, A. *fr.*185 has κέρᾱσι; see above, n.36.

<sup>39</sup> See below the similar form for κρέας; also Chantraine (1961:209).

etc); κέραων (Call. *Ap.*63,<sup>40</sup> Nic.*Ther.*322). Forms like κέρατος, κέρασι, κέρατα are analogical (Arat. *Phaen.* 1.74, A.R. 4.978 and Nic. *Ther.* 291 respectively).

Conclusions:

- a) κέρας is an *s*-stem in Homer.
- b) the first time it appears as a *t*-stem is in Pindar, but the overwhelming number of examples comes from Attic, a fact supporting Herodianus' testimony.
- c) a Doric inscription shows that the *s*-stem existed in Doric in the 4<sup>th</sup> century.
- d) the *t*-stem is likely to have developed in Attic, after the split with Ionic.

## 6) Κνέφας

Chantraine gives for this word no certain etymology. The word appears in Homer only once, in the genitive: κνέφαος (σ 370). Another genitive is met in Aristophanes (*Eccl.* 291 a): κνέφους.

Other forms: the datives κνέφα (X. *Hell.* 7.1.15.8; *Cyr.* 4.2.15.5) and κνέφει (*Crin.* *AP.*7.633). Both κνέφους and κνέφει are derived from the nominative κνέφος,<sup>41</sup> a word attested in *Suidas*;<sup>42</sup> they are analogical forms after the type γένος.

The genitive κνέφατος appears only once (Plb.8.26.10.2) in the 2<sup>nd</sup> century B.C.

Conclusions:

Κνέφας is a rare word in Greek literature. The *t*-stem appears late, in the 2<sup>nd</sup> century B.C., in *koiné*. It lacks *t* in Homer and even later in Attic authors such as Aristophanes or Xenophon.

Homer could have used in the line κνέφατος, which scans metrically exactly in the same way as κνέφαος. The fact that

<sup>40</sup> Probably influenced by Homer; Theocritus also uses κέραος, which is not used in Homer, but which was probably the form of the Ionic epic poetry.

<sup>41</sup> Cf. τέρεος above, where no τέρος was attested.

<sup>42</sup> *Suidas Lexicon* (kappa.1861.1).

he didn't presumably means that the *t*-stem was not current in Ionic by that time. The most important observation is that the *t*-less forms seem to have been used by Attic authors until very late.

## 7) Κρέας

Κρέας is not originally a *t*-stem in Greek displaying predominantly only the *s*-stem. The first use of a *t*-stem is in an Attic inscription from 338 B.C.<sup>43</sup> Other than this, the *t*-stem is rarely found in authors: κρέατων (*Testamentum Abrahæ* 6.10, 1<sup>st</sup> century A.D.); κρέατος (Ath.5.20.36;<sup>44</sup> Origenes in *Comm. Matt.*12.31.65). The examples seem to increase only little during the following centuries. Chantraine (1958:210) believes that the insertion of *t* may be old, in fact as old as Homer, since there are formulas in the *Odyssey*, where κρέα τ' can be read κρέατ': ἡμεθα δαινύμενοι κρέα τ' ἄσπετα καὶ μέθυ ἠδύ (ι 16 2, 557, etc); δαῖτ' ἐντυνόμενοι κρέα τ' ὄπτων ἄλλα τ' ἔπειρον (γ 33); ὡς φάθ', ὁ δ' ἐνδυκέως κρέα τ' ἦσθιε πῖνέ τε οἶνον (ξ 109). However, the last one above seems to show a chiasmic<sup>45</sup> construction, which makes sense only if κρέα is read as an *s*-stem.

We see then that the forms with *t* are very rare. Chantraine's claim that *t* is very old is not well supported by the evidence. The *t*-less forms, on the other hand, are very well attested, beginning with Homer and continuing throughout centuries. Homer has κρειῶν,<sup>46</sup> instead of normal κρεάων (*h.Merc.*130). The dative κρέασιν (Θ 162) and the form κρέα, with short α<sup>47</sup> in the nominative/accusative plural, are both Homeric. The

<sup>43</sup> See Schwyzer (1939:515)

<sup>44</sup> He also uses the *s* stem, e.g., κρέα (*Deipn.* 4.35.16).

<sup>45</sup> Κρέα is before ἦσθιε and οἶνον after πῖνε, a ABBA construction. If we had κρέατα then an asymmetry would be created by the presence of the second τε (καὶ would have preserved the symmetry).

<sup>46</sup> E.g., Λ 551; Chantraine thinks that κρειῶν < \*/kreeōn/, analogically to the type γένος.

<sup>47</sup> Normally, it should have been with *ā*, from \*/kreea/ < \*/kreesa/.

short  $\alpha$  in κρέα is explained by Chantraine in two ways: either as being from a  $t$ -less stem like \*/krewa-/ or formed by analogy to the neuters in short  $\alpha$  from the nominative/accusative plural.

Other forms: κρέα (Semon. *IEG* 24.1; Thgn. *Eleg.*1.293; Hdt.1.119.26; Ar. *Ach.*1049; Arist. *Prob.*884b.1); κρέως<sup>48</sup> (S.Fr. 728); κρίως (*GDI* 5128, Crete, 6<sup>th</sup> century B.C.); Doric κρήσ (Ar. *Ach.*795; Sophr. *Fr.*22); κρεάεσσι (Epic.in *Arch. Pap.* 7.4); κρέεσσι (Orac.ap.Hdt.1.47).<sup>49</sup> The words compounded with κρέας are also  $t$ -less: κρεανόμος, κρεανομία, κρεαδοσία, κρεοβόρος, κρεουργός, etc. Modern Greek, however, uses κρέας as a  $t$ -stem,<sup>50</sup> which is also shown by the word κρεατινός.<sup>51</sup>

Conclusions:

a) κρέας persists as an  $s$ -stem long after Homer.

b) there is no clear evidence when  $t$  got into the paradigm. Chantraine's assertion that  $t$  might be Homeric, i.e., Ionic, is not very well supported by the data.  $T$  appears for the first time in an Attic inscription from the 4<sup>th</sup> century B.C. Herodianus' testimony also supports the idea that the  $t$ -insertion for this word is Attic.

## 8) Σέλας

There is only one form with  $t$  attested: σέλατος in Conon (49.2), in the 1<sup>st</sup> century A.D. All the other forms are  $s$ -stems: the datives σέλαϊ (P 739), σέλα (φ 246); the genitive singular σέλαος (Plot.6.7.33); the nominative/accusative plural σέλα (Arist.*Mu.*395<sup>a</sup>31; Plu. *Caes.*63); the genitive plural σελάων (Arist.*Mu.*395<sup>a</sup>31 codd).

Conclusions:

Σέλας is predominantly an  $s$ -stem in all dialects (Attic, Ionic and, perhaps, *koine*); the  $t$ -stem appears only once and very late, in the 1<sup>st</sup> century A.D.

<sup>48</sup> Attic contraction.

<sup>49</sup> The last two are analogical datives.

<sup>50</sup> The genitive is κρέατος.

<sup>51</sup> See Chantraine (1968).

## 9) Τέρας

a) Τέρας is included by Benveniste among those stems with archaic *t*. However, it doesn't have a *t*-stem in Homer. In addition, if Myc. *te-ra-a<sub>2</sub>* stands for this word,<sup>52</sup> then it means that in this archaic dialect the *t*-stem was not in use. Homeric forms: τεράων (M 229), τεράεσσι (Δ 398, 408, etc.), τέραα (accusative plural, μ 394).<sup>53</sup> The *s*-stems continued to predominantly exist throughout the centuries: τερέων (Alc. LP. 1.424.1); τέρεα (Hdt.8.37.8); τέρεος (Hdt.8.37.9);<sup>54</sup> τεράων (Call.O 1569; A.R.4.1364); τέραος (Arat. Phaen. 1.402), τέραα (Ar. Byz.Epit.2.360.5) etc.

The denominative verb τεράζω (A. Ag. 125), whatever its analogical basis may be, is not derived from the *t*-stem.<sup>55</sup>

The *t*-stem appears extensively beginning with the 5<sup>th</sup> century: τέρατα (Hdt. 2.82.5; X. Mem. 1.4.15.5; Pl.Phileb. 14 e 3, Hp. Ma. 300 e 7), τέρατος (Hdt. 2.82.6; Pl.Crat. 394 d5). The derivatives show also a *t*-stem: τερατείας (Ar. Nub. 318), τερατώδες (Ar. Nub. 364); τερατωπόν (h.Pan.36)<sup>56</sup> etc.

Conclusions:

a) Attic writers have a strong preference for the *t*-stem beginning with the 5<sup>th</sup> century B.C.

b) The *s*-stem is met in Homer throughout.

c) The authors who use the *s*-stem write in Ionic or Aeolic (Alcaeus, Herodotus), or are influenced by Homer (Apollonius, Callimachus).

<sup>52</sup> Cf. Aura Jorro (1985–93).

<sup>53</sup> The meter is not affected by the use of *t* forms; the poet could have used either one.

<sup>54</sup> These (Ionic and Aeolic) forms with *e* are explained in two ways: either by analogy to the type γένος or as a result of the tendency to avoid the contraction α + ο. Cf. Chantraine (1968), Schwyzler (1939:242–3).

<sup>55</sup> The presents ending in -ζω originate in verb roots ending in \*/g/, \*/g<sup>w</sup>/ or \*/d/: \*/harpagyō/ > ἀρπάζω. \*/elpidyō/ > ἐλπίζω, etc; on the other hand, if we had dealt with a *t*-theme in τέρας, this type of verb would have had the form \*/teratyō/ > \*/terassō/. This shows that the form τεράζω is analogical and similar to other such forms, e.g. νόμος/νομίζω, τεῖχος/τειχίζω, ἀγορά/ἀγοράζω etc.

<sup>56</sup> Composed in the 5<sup>th</sup> century; cf. Athanassakis (1976).

d) In spite of Benveniste, the *t*-stem occurs late (5<sup>th</sup> century) and only in Attic.

## 10) Χάρις

Χάρις means 'grace, favor'. In Homer the accusative singular is χάριν and the dative plural χάρισι. These forms derive from a root χαρ-, which can also be seen in χαίρω < \*/kharyō/ 'enjoy'. There is also a *t*-stem of this noun: χαριτ-, which means 'Graces', Χάριτες (E 338, Ξ 267; Hes. *Th.*907; *h. Ven.* 61, 95; *h. Ap.*194; *h. Art.* 15; *Cypr.*4.1, 5.4). Other occurrences referring to the Graces: Alc. *PMG* 1.20; Sapph. *LP* 53.1; Alc. *LP* 386.1; Stesich. *PMG* 35.1. The *t*-stem used as a common noun occurs first in Hesiod (χάριτι, *Fr.*185) and is well attested afterwards: Anacr. *Iamb.* 7.142.1; Thgn.1.15; Ibyc. *PMG* 341 (χαριτώσιος 'thank-offering'); Pi. *P.*3.72, 4.275, *O.*7.93; A. *Ag.*787, *Ch.*320. In addition, Herodianus tells us that Anacreon (*PMG* 487) was the first to use χαρίεις in its full form χαριτόεις.

From the 5<sup>th</sup> century on the examples abound. As we can see from above, Homer uses only the singular for the common nouns, whereas the plural is reserved for the goddesses. The attested accusative forms for the common noun are χάριτα and χάριν. It would be interesting to look for the way these were used in parallel. There are situations in Homer when the poet could have used χάριτα instead of χάριν, because the meter would have allowed the elision, as it is the case in E 574 (χάριν ἀνδρεσσιν). The fact that he didn't use it seems to show that the form χάριν was, if not the only one, at least the prevailing one in Ionic. The same conclusion can be reached about other dialects, since Hesiod, Pindar or Aeschylus could have used in their poetry the elided form χάριτ' instead of χάριν.<sup>57</sup> The first author to use both forms is Euripides, e.g., χάριτα (*Hel.*1378), whereas χάριν appears elsewhere (*TLG*

<sup>57</sup> Some examples: Hesiod (*Op.*65): χάριν ἀμφιχέαι, Pindar (*O.*2.10): χάριν ἄγων, Aeschylus (*Ag.*1545): χάριν ἀντ' ἔργων, etc.

lists 163 examples of *χάριν* in Euripides). Herodotus uses *χάριτα* twice (6.41.13; 9.107.16); otherwise he uses *χάριν*. This could show the fact that, although *χάριτα* was present in Herodotus, *χάριν* was the predominant form. The 7<sup>th</sup> and 6<sup>th</sup> centuries know only *χάριν*. The numbers are relevant:<sup>58</sup> 39 times in Theognis, 29 in Pindar, 26 in Aeschylus, etc.

In addition, *χάριν* is used as a preposition in Homer (O 744: *χάριν Ἐκτορος*), and Hesiod (*Op.*709: *ψεύδεσθαι γλώσσης χάριν*, 'lying for the sake of talking').

One of the most puzzling issues regarding this word is that the *t*-stem seems to have existed long before Homer, but only when the word meant 'Graces'. It is difficult to see the reason for this. The etymology that has been proposed for this word,<sup>59</sup> linking it to the Armenian *jir* < \*/ghēr-i-/, is not very helpful since it only shows that the original form of the word was not a dental stem. How did it get then *t* into its paradigm?

Benveniste (1935:34), bringing up similar facts from Indic and Iranian, compares *χάρις* with a morphologically similar word, *θέμις*, which would be derived from an old neuter in *i*, *θεμι-*.<sup>60</sup> This derivation would be shown by an old phrase like *θέμις ἐστί* = 'it is right' = Lat. *fas est*, or by old compounds like *θεμίσκοπος*, *θεμίξενος*,<sup>61</sup> where the old neuter would be still visible. The change in gender would have occurred when the declension got mixed with that of the feminine nouns in *-ιδ-*, becoming *θέμις*, *θέμιδος*. In other words, the passage from neuters to feminines would have been caused by the confusion between the declension types. As for the *t*-stem, *θεμιτ-*, this would be the result of the analogy after what is now a scarce remainder of former *i*-stems, e.g., *ἄλφι*, *ἄλφιτος* = 'flour'. In short, the steps would have been the following: *θεμι* had its genitive *θεμιτος*, then a new neuter form, *θέμις*, emerged,

<sup>58</sup> The preference for the *t*-less form may show that the *t*-stem did not spread sufficiently by the time we discuss here.

<sup>59</sup> See Chantraine (1968).

<sup>60</sup> Indic and Iranian uses different stems for the same word: Skt. *śociṣ-* = Av. *saoci-*.

<sup>61</sup> 'Seeing to justice'; 'treating strangers justly'.



with the same genitive θέμιτος. At this point a new genitive was created, θέμιδος, after the feminine-type declension, and the word would have become feminine. This would also apply for χάρις, if the assumption that it derives from \*/khari/- were correct.<sup>62</sup>

However, not all Greek words of this sort followed this path: for example, ἄλφι did not become ἄλφισ nor μέλι, μέλις. This makes Benveniste's hypothesis questionable. Therefore, I would take into consideration other facts, which could lead to other hypotheses. In Greek mythology there are other goddesses whose name is a noun ending in -ις: Ἄρτεμις, Μῆτις, Ἴρις, Θέτις, Ἐρις. With the exception of Μῆτις all the others have doubtful etymology.<sup>63</sup> Μῆτις itself is regarded as a *nomen actionis* originally from the PIE root indicating the action of measuring: \*/meH₂/. The paradigms of all these nouns display several stems. Ἄρτεμις has stems in both -ιτ- (Myc. *A-te-mi-to* Ἀρτέμιτος, *A-ti-mi-te* = Ἀρτέμιτει; SIG 765, Doric, Rhodes; Delphi, SIG 671) and -ιδ- (*h. Ven.*16; SIG VII, 546, Boeotia). There is also an accusative Ἄρτεμιν (*h. Ap.*15, etc. Ἀρταμίτιος<sup>64</sup> is a Doric name of a month (Th.5.19). Ἴρις has a stem in δ, Ἰριδος (Thphr.CP.6.11.13), but also the accusative in -ιν (Plu.2.66<sub>4e</sub>), besides the other accusative Ἰριδα (Nic.AL.406). Θέτις shows a genitive Θετιδος (Δ 512), but there is also a Doric form Θετιος (Pi.I.8.7.30); the accusative is Θετιν (N 350, etc). Μῆτις<sup>65</sup> has a genitive Μήτιδος (A.Supp. 61), but also Μήτιος (Pi.N.3.9), and an accusative Μήτιν (B 407). Ἐρις is only a δ-stem.

The stems of these nouns show a complicated picture in respect to their origins. Two things are clear: first, the themes in δ are predominant, which fits the fact that these nouns are feminine; second, the variety in forms is due to multiple analogies.

<sup>62</sup> As it is the case with θέμις, there are compounds with χάρις, in which the first part of the compound is χάρι-, e.g. χαριδώτης= 'joy-giver'.

<sup>63</sup> See Chantraine (1968).

<sup>64</sup> Chantraine (1968) inclines to believe this a proof for an original *t*-stem.

<sup>65</sup> The *-ti* instead of the assibilation is still unexplained; see Chantraine (1968).

Thus, the accusative in *-tv* or the genitive in *-ιος* are analogical to the type *πόλις*. On the other hand, the Mycenaean forms for Ἄρτεμις or the Doric month show that *t* is old. We can always say, like Chantraine, that the *t*-stem is original. However, it is also possible that these nouns got their *t* from a noun like Θέμις, where *t* could be a trace of a neuter noun. The process could have been as follows: θέμις and χάρις derive from neuter common nouns, which got *t* after the model ἄλφι, ἄλφιτος, μέλι, μέλιτος. The words for goddesses, Θέμις and Χάρις, could get their *s* in the nominative either because *s* was the ending for the animate or because the name of the other goddesses may have had an analogical influence. Thus these proper nouns continued to display the *t*-stem. Then the proper noun Θέμις replaced as a nominative the neuter noun from which it had derived. The names of the other goddesses, which originally were *d*-stems, became *t*-stems analogically.

Conclusions:

a) the *t*-stem appears in Homer, but only referring to the Graces; Homer doesn't use it for the common noun (for which he uses only the accusative singular).

b) Homer and other poets – both in Ionic and Attic – could have easily used *χάριτα* instead of *χάριtv* before vowels (when the elision could have taken place); the fact they didn't seems to indicate that *χάριtv* was a persistent form.

c) The *t*-stem first occurs in Hesiod, in the dative (it could be Attic).

d) Euripides and Herodotus<sup>66</sup> are the first evidence for the use of *χάριτα*. However, these authors have a clear preference for *χάριtv*.

e) The *t*-stem seems to be well established in the 6<sup>th</sup> century, especially in non-Ionic dialects (Pindar, Aeschylus). The *t*-stem in the proper name indicates its origin at least in Ionic-Attic. It may be that the persistent use of the *t*-less stem for the common

<sup>66</sup> Herodotus, however, makes use of Atticisms.

noun was due to the difference in meaning between this one and the proper noun.

### 11) Γόνυ

Γόνυ displays both themes in Homer.

The 'normal' genitive singular is γουνός < \*/gonwos/,<sup>67</sup> e.g., in Λ 547 and τ 450; the form γούνατος, with the *-at-* extension, appears at Φ 591.<sup>68</sup>

Neither the dative singular nor the accusative singular are represented in Homer.

The nominative and accusative plural γούνα occurs very often (Ζ 511, Ξ 468, ζ147, ι 266 etc). Among all these occurrences none could have been metrically replaced with an elided γούνατα. Γούνατα, on the other hand, appears 45 times in Homer, sometimes in well-established formulas like γούνατα καὶ φίλον ἦτορ (9 times) or γούνατ' ἐλύσεν (10 times). It is worth seeing that these forms also cannot be substituted with *t*-less ones. In many instances, the following word begins with a vowel, and γούνατα is elided. But so would α in γούνα be; thus, these forms are metrically irreplaceable.

The Ionic genitive plural, γούνων, appears 25 times in Homer (15 times in the *Iliad*, e.g., Α 407, Ζ 45 etc.).

The dative plural is γούνασι (18 times in Homer, e.g., Ε 370, with short α) or γούνεσσι<sup>69</sup> (Ι 488, Π 451, 569). It can be noticed that the two forms fit different places in the hexameter.

The *t*-less stem doesn't seem to have lasted long after Homer. It appears in traditional poetry, in hexameters: γούνων in *h. Cer.* 263, *h. Merc.* 328.<sup>70</sup> Some Aeolic forms, e.g., γόνα or

<sup>67</sup> The forms are the result of the Ionic compensatory lengthening.

<sup>68</sup> The forms δούρατος, γούνατος, δούρατος, etc. are analogical to words like δνομα, δνόματος; see Chantraine (1961:80); Sihler (1995:302). It is not the case that all the neuters in *-u* got *-at-* in their paradigms: δάκρυ is such a word.

<sup>69</sup> Aeolic ending applied to an Ionic stem. This is clear because of the lengthening which occurred in the stem, γούν-, and which is Ionic, not Aeolic.

<sup>70</sup> The hymns to Demeter and Hermes were composed in the 7<sup>th</sup> century.

γόνων, show up in Alc. *LP* 39.7 and *Supp.*10, respectively.<sup>71</sup> Sporadically, the *t*-less stem continues to appear even later: in the 3<sup>rd</sup> century γούνων in Apollonius (3.187, 1384).

The *t*-stem is predominant after Homer. The Ionic γούνατα: Hes. *Op.* 587, 608; Tyrt. *IEG* 10.19; Alc. *PMG* 85b1; γουνάτων: Thgn. *Eleg.*1.978; *Hdt.*1.112.4; Euripides and Sophocles use only the *t*-stem (e.g., *Hec.*752 and *OC.* 1607, respectively). An inscription from Chios (4<sup>th</sup> century B.C.) has γούνατα (Schwyzer 694.7).

Conclusions:

a) Homer knows both the *t*-stem and the *t*-less stem.

b) the *t*-less stem becomes very rare after Homer; it is found in both hexameters and Aeolic poetry. In the Ionic and Attic dialects, the *t*-stem seems to be well established in the 5<sup>th</sup> century B.C. There is no compelling evidence for what happens in the Doric dialects. The *t*-stem seems to have occurred first before the Ionic and Attic split. It could also be that the development of this theme was faster in Attic than in Ionic. On the other hand, Aeolic seems not to have known the *t*-stem.

## 12) Δόρυ

This word is parallel in many ways to γόνυ, the most important fact being that both the *t*-stem and the *t*-less one appear in Homer. Hesiod uses both of them as well, although he uses only the *t*-stem for γόνυ.

The genitive sing. δουρός < \*/dorwos/: Γ 61, 78, Π 295, τ 453, etc.

The dative sing. δουρί < \*/dorwi/: Α 303, Ο 420, Θ 229, π 441, Hes. *Sc.* 362.<sup>72</sup>

The nominative/accusative dual δούρε: Κ 76 = σ 377, Γ 18, Μ, etc.

<sup>71</sup> These forms are Aeolic because they are not contracted as in Ionic.

<sup>72</sup> It appears 5 times in the *Odyssey*; compounds like δουρίκλειτος are excluded in this count.

The dative plural has in Homer, as expected, two forms: the Aeolic<sup>73</sup> δούρεσσι (M 303 = θ 528) and δούρασι (Φ 162). The latter form appears also in Eumelos (*Fr.*9.4).

The genitive plural δούρων: X 243 = ρ 384.

The nominative plural δούρα: Homer (43 times), Hes. *Op.* 807; *h. Ap.* 403.<sup>74</sup>

These forms continue to appear throughout centuries. Δουρός and δούρασι: Tyrt. *IEG* 11.20, 37; δουρί: Alc. *PMG.*6.8.1; Anacr. *PMG* 43.7; Pi. *N.*9.26; Simon. *PMG.* 59.1; Hdt.6.77.14; δούρων: Pl. *Resp.* 389d3; δούρατος: Pi. *P.*4.38, Theoc.22.185; δούρατι: Simon. *PMG.*38.1.10; S. *Ph.* 723; Pl. *Theaet.* 207a4. Ionic forms coexist throughout the following centuries, e.g., in Theocrit: δουρα (16.78, 22.190), δούρατος (22.185), δούρατι (24.125).

The *t*-stem appears extensively in Homer: the genitive singular δούρατος (22 times), the nominative/accusative plural δούρατα (17 times). Other occurrences: δούρατα: Hes.*Op.* 456; δούρατι: Hes. *Sc.* 462. Archil. *IEG* 98.5 uses both δούρατα and the Atticism δορί (*IEG* 2.1). Other Atticisms, i.e. forms without the compensatory lengthening after the loss of F: δορί: Pi. *I.*8.52;<sup>75</sup> A. *Supp.*1007; S.*Tr.*478; δόρατος: Ar. *Ach.* 1120; Th. 5.10.5.4; δόρατα: X. *Hell.* 2.4.15.4. Aeschylus uses the form δορός (*Supp.*135). A form δορεί<sup>76</sup> can be found in S.*OC.* 620, 1314, 1386, where is required by the meter. Δορί is required by the meter in A.*Th.* 347, 456, 958, and E.*Hec.* 909.

As we can see the Attic forms are not restricted only to Attic authors, and, conversely, the Ionic forms are used by Attic authors.

Conclusions:

a) δόρυ displays the allomorphy as early as Homer and Hesiod; both these authors seem to have known only the forms with compensatory lengthening.

<sup>73</sup> The ending is Aeolic, but it is attached to the Ionic form, δουρ-.

<sup>74</sup> It was probably composed at the end of the 6<sup>th</sup> century B.C.

<sup>75</sup> This form in Pindar could be Doric or even Aeolic.

<sup>76</sup> Analogical to the type γένος.

b) Both themes survived throughout the centuries, and authors used one or the other forms regardless the dialect they belonged to. Attic authors tend to use more the forms without compensatory lengthening, but there are exceptions; Doric authors like Pindar use sometimes the Ionic forms.

c) The fact that the *t*-stem exists in both Ionic and Attic shows that it got there as early as Ionic-Attic, before the loss of *F* caused the Ionic compensatory lengthening.

d) There is no relevant data for Doric and Aeolic *t*-stems.

### 13) Γέλως

This word appears in Homer only as a *t*-less stem: the dative singular γέλω (σ 100), the accusative singular γέλω (σ 350, υ 8, 346).

In *h.Pan* (37) we find a compound form like ἡδυγέλωτα, but this hymn is composed later, in the 5<sup>th</sup> century B.C.

The first time the *t*-stem shows up is in *A.Ch.* 447 (γέλωτος).<sup>77</sup> The Athenian Thespis (3.2) still uses the accusative singular γέλων,<sup>78</sup> where the *n* is a reinforcement of the accusative ending.

In the 5<sup>th</sup> century, the forms with *t* are more numerous: e.g., γέλωτι (Hdt.9.82); γέλωτος (E. *Melanipp.Capt.* 492.1.5; Th.4.28.5.1). Forms without *t* continue to exist: e.g., γέλων (E. *Med.*383; S. *Aj.* 303, *Ant.* 647). Aristophanes makes use of both γέλων (*Vesp.*1260) and γέλωτα (*Av.* 732), whereas Xenophon and Plato use only the *t*-stem (*Cyr.*2.2.11, *Lg.*669d). In Ionic, Herodotus uses only the *t*-stem, e.g., γέλωτα (2.121; 3.29.7). In the 4<sup>th</sup> century, Apollonius has γέλω (*Arg.* 4.172), but this may reflect a Homeric influence.

Conclusions about the *t*-stem:

a) It is not found in Homer.

<sup>77</sup> We deal here with authors living around the end of the 6<sup>th</sup> century A.D.

<sup>78</sup> See Chantraine (1961:72).

b) It appears first in Aeschylus, and it is used consistently afterwards in the Attic dialect. Ionic is not so richly represented; its use in Herodotus could be an Atticism.

c) The only older form which shows up after Homer is the accusative singular γέλων:<sup>79</sup> Thespis, Euripides, Sophocles, Aristophanes and Apollonius are such examples. It seems that this form was the last one to be replaced and the most resistant to being removed. It is likely that the *t*-stem of this word is an Attic innovation.

#### 14) Ἔρωϝ

Ἔρωϝ is not a *t*-stem in Homer. In Γ 442, Ξ 294, we find the nominative form ἔρωϝ<sup>80</sup> and in Ξ 315 a thematic nominative ἔροϝ.<sup>81</sup> The thematic form is used in the accusative singular (ἔροϝ 24 times in Homer, sometimes in fixed formulas at the end of the line, like ἐξ ἔροϝ ἔντο), and in the dative singular, ἔροϝ (σ 212). The formula mentioned above also occurs in Hesiod and *h. Ap.* 499, 513.

The thematic form ἔροϝ continued to exist after Homer: Sapph. *LP* 15b.12; Alc. *LP* 296a2; Thgn. *Eleg.* 1.1064; E. *Hipp.* 337.

The genitive singular ἔροϝ is not found until the 5<sup>th</sup> century, in Hippocrates (*Morb.* 3.15.24); a dative ἔροϝ appears in A. *Supp.* 1002.

The *t*-stem: ἔρωτοϝ (Sapph. *LP* 23.1; A. *Th.* 688, *Ag.* 743); ἔρωτι (Thgn. *Eleg.* 2. 1350; Pi. *Frg. Encom.* 127);<sup>82</sup> ἔρωτα: *h. Merc.* 449; ἔρωτες (Pi. *P.* 10.60, *N.* 3.30);<sup>83</sup> ἔρωτων (Pi. *N.* 8.5; A. *Supp.* 1042); ἔρωταϝ (A. *Ch.* 597); the god Ἄρωτα

<sup>79</sup> The case is similar with what happens with χάρμν.

<sup>80</sup> We cannot tell whether this form is an *s*-stem or a *t*-stem: it could also be from \*/erōts/.

<sup>81</sup> The thematic form is considered to be Aeolic; see Wathelet (1970:255).

<sup>82</sup> Theognis usually writes in Ionic; however, he can use other dialects, like Doric. See Palmer (1980:112).

<sup>83</sup> This does not point necessarily to a Doric fact. Pindar uses many dialectal forms like Ionic or Lesbian.

(Anacr. *Eleg.*5.33.2). Euripides can use both stems in the same play (*Hipp.*337, 775). However, he shows preference for the *t*-stem (44 times).<sup>84</sup> Herodotus also uses it (5.32.11, 9.113.14).

The *t*-stem can also be seen in derived forms: e.g., ἔρωτιάω (Hp.*Ep.*19); ἔρωτικός (Th.6.57.59; Pl.*Phdr.*227c); ἔρωτίς (Theoc.4.59); ἔρωτισκός (in a Tanagra inscription, 3<sup>rd</sup> century B.C.; cf. Schwyzler 462 B 54)

Conclusions:

a) ἔρωζ is not a *t*-stem in Homer; the *t*-stem first appears in Sappho, in Lesbian. However, we cannot draw a firm conclusion from these facts. Perhaps the *t*-stem couldn't find a place among the Homeric formulas.<sup>85</sup> Sappho shows that Homer could have known the *t*-stem. Thus, the *t*-stem could go back even before Ionic-Attic.

b) The 5<sup>th</sup>-century evidence (Euripides) shows that at this time the *t*-stem becomes the dominant form, at least in Attic.

## 15) Ἰδρῶς

This noun is one of those where it metrically makes a difference whether a poet uses different allomorphs in the line. Homer uses only the *s*-stem:

a) the dative ἰδρῶ < \*/swidrōsi/ (P 385, 745)

b) the accusative ἰδρῶ < \*/swidrōsa/ (Δ 27, K 572, 574, Λ 621, Φ 561)

There is, however, an instance where Homer makes use of a theme in *t*: in ο 228 we find the adverb ἀνιδρωτεῖ. The adverb, however, is paralleled by the adjective ἀνιδρωτος, where the suffix is *-to-*, not *-t-*. Although Chantraine believed this adverb to be ancient and reflect a *t*-stem, there are some other adverbs of this type, which aren't originally the reflex of a *t*-stem, but a result of the reanalysis of the morphemes: ἔγρηγορτί, ἀνωιστί, ἐλληγιστί etc. In addition, the fact that these adverbs are derived from their corresponding adjectives is supported

<sup>84</sup> Euripides uses ἔρον 5 times and ἔρωτα 11 times.

<sup>85</sup> ἔρον cannot be a metrical substitute for ἔρωτα.



by the existence of pairs like ἄωρος- ἄωρεί, ἄσπονδος- ἄσπονδεῖ, etc. It seems then that *t* in ἀνιδρωτί and *t* in the stem of ἰδρῶς have nothing to do with each other. Thus, it may be that ἰδρῶς is still a theme in *s* in Homer and gets its *t* only later, especially in Attic: e.g., ἰδρῶτα (Hes.*Op.* 289); ἰδρῶτα (Ar.*Ec.*750; Ar.*Ach.*695; X.*Mem.*2.1.20.10); ἰδρῶτι (S.*Aj.* 10; Hdt.7.140.13); ἰδρῶτος (X.*Oec.*10.8.5); ἰδρῶτων (Pl.*Phaedr.* 239 c.8).

#### Conclusions:

This noun most likely gets its *t*-stem in Attic, appearing for the first time in Hesiod. A *caveat* here: Homer could simply avoid it because of the meter. Forms like the accusatives ἰδρῶ or ἰδρῶτα satisfy different metrical conditions. However, the fact that in Λ 621, Φ 561, X 2, where the context was favorable, Homer did not make use of the *t*-stem,<sup>86</sup> might be an indication that the *t*-stem was not current in the Ionic dialect.

#### 16) Φῶς

The Homeric words for 'light' are φάος and φῶς. The latter was explained by Wackernagel as being the creation of the diction, after the Ionic-Attic contraction α + ο > ω took place.<sup>87</sup> This process, called διέκτασις, consists of repeating a vowel for metrical accommodation. Clear examples are ὀράασθε, μνώοντο, ἥβῶοντα, which cannot be explained etymologically. When an 'old' form like ὀράεσθε contracted to ὀρᾶσθε, bards created the new form in order to maintain the number of *morae* in the meter. In our case, φῶς becomes φῶς. Wackernagel noticed that this form is used only in front of consonants, exactly where φάος used to fit the meter before the contraction.

Φῶς appears after Homer in Hesiod (*Th.*669) and the Homeric hymns (*Ap.*119,<sup>88</sup> *Merc.*12.141, 184). If Wackernagel was correct, then the contracted form φῶς already existed in the

<sup>86</sup> The formula is ἰδρῶ ἀποψυθεῖς.

<sup>87</sup> Wackernagel (1916:66-7); cf. Chantraine (1958:75-7).

<sup>88</sup> Belonging to the 6<sup>th</sup> century, but the diction may have been older.

8<sup>th</sup> century, but Homer didn't use it probably for metrical reasons.<sup>89</sup> The data below support this conclusion.

Φάος continued to exist in many dialects throughout the centuries: Archil. *IEG* 24.18; Sapph. *LP* 56.1; Alc. *LP* 34.a.11; Stesich. *SLG* 102.8; Thgn. *Eleg.* 5.169; Pi. *O* 4.10; A. *Pers.* 222; Ar. Ach. 1185). This shows that the uncontracted form continued to exist alongside the contracted form. One cannot exclude this to be the result of the epic diction's influence, but it is not impossible that the speakers used the form. Φῶς, the contracted form, appears in both Ionic and Attic: Alc. *PMG* 1.1.40; Thgn. *Eleg.* 1.1143; A. *Pers.* 167; Ar. *Nub.* 614 etc.

Homeric forms: the dative singular φάει (P 47, φ 429); the accusative plural φάεα (π 15, ρ 39, etc.). Other occurrences: the genitive singular φάους (X. *Cyr.* 4.2.9, 26; *Oec.* 9.3; Arist. *de An.* 429.3); the uncontracted genitive φάεος (Pl. *Crat.* 407c4); φάεεσσι, with Aeolic ending (Hes. *Fr.* 142.4; Call. *Dian.* 211); φάεσι (Call. *Dian.* 71); the genitive plural φάέων (Arat. *Phaen.* 1.90); the accusative φῶν (*BCH.* 51.380); the dative plural Φωσί (Ps.-Democr. *Alch.* p.46B, 5<sup>th</sup> century B.C.).

The *t*-stem: φωτί (A. *Th.* 435, 470); φωτός (Pl. *Rep.* 518a); φῶτων (*IG* IV. 1<sup>2</sup>.110.43, Doric, Epidauros).<sup>90</sup>

Also, the *t*-stem shows up in the adjective φωτεινός (X. *Mem.* 4.3.4.2).

The dative φῶ (E. *Fr.* 534.1) suggests a center of resistance for the old forms in Attic.

Conclusions:

a) φῶς is not Homeric, only φάος and φῶς; the fact that φῶς exists presupposes a contracted form φῶς. Consequently, the contraction is Ionic-Attic.<sup>91</sup>

<sup>89</sup> The lack of formulas with φῶς in it.

<sup>90</sup> We cannot be sure the form is Doric. Inscriptions from Epidauros show often Attic features; cf. Buck (1955:164).

<sup>91</sup> In Attic the contracted forms are more often than in Ionic. However, a sequence *a + o*, with tonic *a*, is rare in Greek. μνάομαι gets contracted in Homer, e.g., ἐμνώοντο (β 686), but this could be analogical to the first person plural, \*/emnaometha/ > ἐμνώμεθα.

b) The *t*-stem appears first in the 6-5<sup>th</sup> centuries in Attic (Aeschylus).

c) No evidence for a *t*-stem in Aeolic or Doric.

d) The *t*-insertion, which appeared after the Ionic-Attic contraction, occurred most likely in Attic, although we cannot exclude its occurrence in Ionic-Attic, where, however, the *s*-stem was predominant.<sup>92</sup>

## 17) Χρώς

The *s*-stem is predominant in Homer: χροός appears 20 times,<sup>93</sup> χροῖ 42 times, χρόα<sup>94</sup> 32 times. The *t*-stem shows up only three times: χρωτός (K 575), χρωῶτα (σ 172, 179). These forms could be later than the 8<sup>th</sup> century, since they appear in the 10<sup>th</sup> book of the *Iliad* and in the *Odyssey*, which may have been composed later, perhaps at the beginning of the 7<sup>th</sup> century.<sup>95</sup> Nevertheless, Hesiod uses the form χρωῶτα (*Op.*556), so these forms seem to have existed in the formulaic epic diction of the 8<sup>th</sup> century B.C.

One can notice that different forms represent different options for the hexameter; for example, the occurrences of the *t*-stem in the *Odyssey* are at the beginning of the line, a position where the first syllable is long. Χρόα could not have fitted this position, therefore the poet chose another form he had at hand.<sup>96</sup> The forms were considered to be Atticisms by Chantraine (1968).

These stems coexist after Homer: χροός (Thgn. *Eleg.* 2.1341); χροῖ (Pi. *N.* 8.28; A. *Supp.* 790; S.*Tr.* 605; E. *Cyc.* 399; Hdt. 4.175.5 etc.); another dative, χρωῖ,<sup>97</sup> occurs only in the phrase ἐν χρωῖ = 'in the skin' in S. *Aj.*786; X. *HG.* 1.7.8; Th.2.84; χρόα (Archil. *IEG* 188.1; Tyrt. *IEG* 10.27; Sapph.

<sup>92</sup> For Chantraine *t* is an Attic innovation.

<sup>93</sup> The figures are taken from the *TLG*.

<sup>94</sup> All these forms result from the loss of *s*: \*/khrosa/ > χρόα, etc.

<sup>95</sup> Cf. Janko (1982).

<sup>96</sup> σ 172: χρωῶτ' ἀπονηψαμένη, at the beginning of the hexameter.

<sup>97</sup> This form could be the thematic one; cf. Chantraine (1958:211).

S.10.6; Thgn. *Eleg.*1.217 etc); χρωτί (Pi. *P.*1.55); χρω̄τα (Pi. *I.*3.41; A. *Pers.*317) etc.<sup>98</sup> A compound ἀπαλόχροος is found in *E.Hipp.* 1359.

We can see that, especially beginning with the 5<sup>th</sup> century, the *t*-stem becomes predominant. In spite of this, the other forms continue to appear, either because of the Homeric influence or because they were just competing forms.

Conclusions:

a) Homeric χρώς is generally an *s*-stem; there are three cases with a *t*-stem.

b) The *t*-stem also appears in Hesiod.

c) Authors of all dialects use both forms, e.g., Pindar, Euripides, Sophocles, etc. Tragic authors seem to prefer the *t*-stem. Herodotus doesn't use it,<sup>99</sup> which indicates it was not usual in Ionic. All these facts seem to point to Attic as the more likely point of diffusion for the *t*-stem, but its appearance in Ionic-Attic cannot be excluded.<sup>100</sup>

#### 18) Other words with *t*-insertion: ἄλας, δέος, σπέος

Ἄλας 'salt' is, probably, formed from the accusative plural of ἄλς, ἄλός.<sup>101</sup> How old this neuter is we cannot know. The *t*-stem shows up in Bolus (ἄλατι, *Ad Leucippem* 2.54.24, 3<sup>rd</sup> century B.C.). This fact shows that, beginning at least with *koine*, there was a tendency to introduce *t* in words having *-as* in the nominative singular.

Δέος is together with σπέος one of the two neuter nouns in *-es* (type γένος), which gets *t* in their paradigm. This *t* shows up twice: δέατος (*S.Fr.*328), δέατα (*Hecat. Fr.*364J). The forms

<sup>98</sup> The 5<sup>th</sup> century brings more occurrences of the *t*-stem: 18 times in Euripides, 2 times in Sophocles, 2 times in Aristophanes etc.

<sup>99</sup> There is only one occurrence of this noun in Hdt. 4.175.5, but without *t*: χροῖ.

<sup>100</sup> The occurrences in Homer then would be the result of such hypothesis. However, it could be that the center of spreading was what will later become the Attic dialect.

<sup>101</sup> Aristotle uses it for the first time as a neuter noun (*Mir.*844<sup>b</sup> 16).

are given by Herodianus in *Περὶ μονήρου λῆξεως* (30.18) as an indication that certain authors declined these nouns analogically to the neuter stems in *-as*.<sup>102</sup> He also says that the analogical use did not affect the nominative singular, in other words there was no *δέας*. Whether Hecataeus or Sophocles reflected the way speakers used this word in Ionic or Attic we cannot say. If this is really the case, then the insertion of *t* into the paradigm of such words could be Ionic-Attic or even earlier. A similar case is shown by *οὔς* (< \*/owsos/,<sup>103</sup> 'ear', neuter), which in Ionic has the genitive singular form *οὔατος* < \*/owsatos/. In this case, a new nominative singular, *οὔας*, was built.<sup>104</sup> The paradigm of this word is very old, predating the dialects' split. Thus, in principle, *δέος* could have behaved in the same way. In any case, aside from the two forms from above, *δέος* always displays the *s*-stem: the genitive *δέους* (*δείους* at K 376, O 4; *Plut.Flam.7*);<sup>105</sup> the dative *δέει* (*Th.1.26*; *D.21.124*), the nominative/accusative pl. *δέη* (*Lys.6.20*, *Ael.N. A8.10*). This shows that, even later, the noun behaves like a stem in *-es*.

A similar case occurs with *σπέος*: the genitive singular *σπέιους* (ε 68), the datives *σπῆι* (Σ 402, β 20) or *σπέι* (*Opp.C.4.246*), the datives plural *σπήεσσι* or *σπηέσσι* (α 15, ι 400), the genitive plural *σπέων* (*h.Ven.263*). *Σπεάτesssi* only occurs in *Xenoph.37*. Otherwise, the word is not a *t*-stem.

<sup>102</sup> Benveniste believed that the confusion between the *-os* and *-ar/s* nouns was old.

<sup>103</sup> See for details, Szemerényi (1967:47), Nussbaum (1986:152).

<sup>104</sup> Simon. 37.14.

<sup>105</sup> *Δείους* stands for \*/deeos/ before consonants. The diphthong *ou* is spurious; cf. Chantraine (1958:7).

*General conclusions*

The present work tried to explore whether some of the *t*-stems in Ancient Greek are the result of innovations specific to certain dialects or they just represent archaisms from an earlier stage of the language, possibly from Common Greek. In this respect, the work took into account Benveniste's theory, according to which *t* in certain neuter nouns ending in *-as* in the nominative singular is an archaism belonging to Common Greek. Thus, these stems would be the result of a change in the declension type from a heteroclitic one, having *-ar* in the nominative singular – the type ἦπαρ, ἦπατος –, to an *s*-stem type with the nominative in *-as*. This latter type, in turn, was originally represented by words like κέρασ and κρέας. The neuter nouns which, according to Benveniste, have *t* as an archaism are τέρας, γέρασ and γῆρας. However, things are far from being etymologically settled in these cases. Benveniste's argument that γέρασ shows the old *r/n* alternation in other words like γέρων, γεραρός, γεραίρω is not undisputable. Γέρων, for example, might be on old participle,<sup>106</sup> whereas the formation of γεραίρω < \*/geraryō/ might be analogical. In fact, a word like πείραρ, πείρατος, which is heteroclitic and should have behaved like γέρασ, forms a verb περαίνω < \*/pernyō/,<sup>107</sup> not \*/peraryō/. On the other hand, the adjective γεραρός might be only the result of adding the suffix *-ro-* to the stem \*/gerh<sub>2</sub>/.<sup>108</sup> Thus, there is only τέρας, which might follow Benveniste's theory. The name Τειρεσίασ < \*/teret-/ could be a proof for an original *t*-stem of this word.<sup>109</sup> Would it then be possible to accept that *t* spread analogically from a single word? Although improbable, it may have been possible, since we are talking here about a spread to only 5-6 words. Perhaps the crucial fact was that τέρας was not a mar-

<sup>106</sup> Cf. Skt. *jarant-*; see Beekes (1995:109).

<sup>107</sup> For the phonological development, see Sihler (1995:517).

<sup>108</sup> See Chantraine (1933:226).

<sup>109</sup> Mycenaean knows only the *s*-theme for this word; cf. n.52.

ginal word in Greek, but one loaded with religious connotations. On the other hand, if *t* were an archaism in this word, then the *t*-less forms and the *t*-ful ones must have coexisted in Ionic-Attic, so that Ionic could choose the *t*-less one and Attic the *t*-ful one. This could also be the case with γέραζ and γῆραζ, which used the *s*-stems extensively in Attic even in post-Classical period.<sup>110</sup>

Benveniste's theory assumes that in Attic the declension of nouns that had an archaic *t* in their stems exerted an analogical influence on the words that did not originally have *t*. In Ionic the situation was reversed: the forms which were former *s*-stems won over the others, the *t*-ful ones. The mechanism by which this process could be achieved is not entirely transparent, but this theory implies that it was the analogy with the older *s*-stems that produced the change. Under these circumstances, Herodianus' assertion that the Ionic forms lost their *t* could be plausible only if we admit he knew somehow that the "older" Ionic used the *t*-forms as well. The 'dropping' of *t* then would have been a sociolinguistic way for the Ionic population to differentiate themselves from their Attic brothers.

In the attempt to check the validity of this theory, the research showed that the original *s*-stems (κέραζ, κρέαζ) behave pretty much in the same way as those putatively archaic *t*-stems. There is practically no difference in respect to the allomorphic variation between the stems which, according to Benveniste, got their *t* as a result of the heteroclitic declension and those *s*-stems which must have gotten their *t* later, probably analogically to the heteroclitic stems. Thus, from this perspective, there is no difference between the allomorphic variation of γέραζ and that of κρέαζ. They both show that the *s*-stem was initially predominant in historical Greek, and that the *t*-stem eventually won over in Attic. Therefore, we cannot say, by simply looking at the data, which of these words was a *t*-stem resulting from the heteroclitic declension. This fact shows that Benveniste's theory must be

---

<sup>110</sup> The contracted Attic form γέρωζ is a proof of this.

regarded with caution. If we assume this theory to be correct we must admit that the allomorphic variation between the stems existed in Proto-Greek, continued in Ionic-Attic and then ceased to exist after the split of Ionic and Attic. We also have to admit that Attic was the only dialect that retained this archaism, while still keeping the paradigm of the *s*-stem for a certain period of time. In this view, both Ionic and Aeolic gave up the *t*-stems, keeping only the paradigm of the *s*-stem. This complicated scenario shows that, though it is not impossible, Benveniste's theory is less likely to have happened.

Another hypothesis is that not all the words analyzed here belonged to the heteroclitic declension. With the exception, perhaps, of *τέρρα*, these neuters in *-as* may have been *s*-stems from the beginning. The *t*-stem, then, which occurs in Attic would be an innovation within this dialect.

The facts about this "intrusive" *t*, besides having great relevance for the history of Greek nominal morphology, also present an interesting case for general historical linguistics. They show that these nouns did not switch to a *t*-stem declension type overnight and across-the-board. They also make apparent not only that allomorphic variation continued to exist, but also that *t* entered the nominal paradigms and eventually won over in a gradual way, from lexical item to lexical item. Thus, for some of these nouns, like *τέρρα*, the speakers seem to have decided in favor of a *t*-paradigm earlier than the others. These allomorphs continued to exist throughout the centuries. It is only in the 2<sup>nd</sup> century A.D. when the grammarian Herodianus provides us with the information that there was a clear difference between the Attic speakers and the Ionic ones, in the sense that the Attic forms were with *t*, whereas the Ionic ones without it.

An important observation here is that the present research is based not on real speech, but on written sources.

The results and conclusions are synthesized below. A synoptic table shows the time and dialect where *t* was first found.

a) Words in *-ως*: *γέλως* and *ιδρώς* became *t*-stems in Attic; *χρώς* and *ἔρω* probably became *t*-stems in Ionic-Attic.



b) γόνυ and δόρυ became *t*-stems in Ionic-Attic.

c) χάρις and φάος probably became *t*-stems in Ionic-Attic.

d) One cannot say from the data whether the spreading started off with a single case; the first occurrences of *t*-stems can be either accusative (χρῶτα in Homer, ἰδρῶτα in Hesiod), dative (γῆρατι in Isocrates), or genitive (γέλωτος in Aeschylus). This is not surprising given the fact that we deal here with scattered evidence from literary sources and not with data from real speech.

<i>t</i> -stems	Ionic	Attic	Aeolic	Doric	<i>T</i> appeared in (case)
ἄλας		<i>t</i> -stem (Bolus)			Attic D.sg. ἄλατι 3 <sup>rd</sup> B.C.
Ἄρτεμις	<i>t</i> -stem	<i>t</i> -stem	<i>t</i> -stem?	<i>t</i> -stem	Common Greek
γέλως	Herodotus (att.?)	Tragic authors; <i>t</i> -less stem continues to exist	Thematic γέλος		Attic or Ionic-Attic G.sg. γέλωτος 6 <sup>th</sup> B.C.
γέρας	<i>t</i> -less	<i>t</i> -less stem; <i>t</i> -stem in Herodianus			Attic, G.sg. γέρατος 2 <sup>nd</sup> A.D.
γῆρας	<i>t</i> -less	<i>t</i> -less; <i>t</i> -stem in Isocrate, Herodianus			Attic, D.sg. γῆρατι 4 <sup>th</sup> A.D.
γόνυ	Homer, H. Hymns, Tyrtaeus, Herodotus	tragic authors	Only <i>t</i> -less forms, uncontracted		Ionic-Attic γόνυατ-
δέος	<i>t</i> in Hecataeus (?)	<i>t</i> in Sophocles			(Ionic)-Attic δέατος, δέατα 5 <sup>th</sup> B.C.
δέπας		<i>t</i> -stem in Herodianus			Attic G.sg. δέπατος 2 <sup>nd</sup> A.D.
δέρας		<i>t</i> -stem in Herodianus			Attic G.sg. δέρατος 2 <sup>nd</sup> A.D.

δόρυ	Homer. Hesiod; <i>t</i> -less forms in Homer. Hesiod. Simonides	tragic authors. Xenophon. Thucydides; <i>t</i> -less forms in tragic authors. Plato		<i>t</i> -less in Alcman. Pindar.	Ionic-Attic δόρατ-
ἔρωσ	<i>t</i> -less in Homer; <i>t</i> in Theognis	<i>t</i> in tragic authors (also <i>t</i> -less)	<i>t</i> in Sappho; <i>t</i> -less thematic forms in Sappho and Alcaeus		Ionic-Attic and Aeolic; could be C. Greek; G.sg. ἔρωτος 7 <sup>th</sup> B.C.
ιδρώς	<i>t</i> in Homer. Hesiod. Herodotus; <i>t</i> -less stem	<i>t</i> in tragic authors. Aristophanes. Plato			Attic or Ionic- Attic Acc.sg. ιδρώτα 8 <sup>th</sup> B.C.
κέρας		inscriptions. tragic authors. Plato; <i>t</i> -less forms continue to exist			Attic N.pl; N.dual κέρατα, κέρατε 5 <sup>th</sup> B.C. (6 <sup>th</sup> ?)
κνέφας	<i>t</i> -less only	<i>t</i> -less; only in Polybios			Attic G.sg. κνέφατος 2 <sup>nd</sup> B.C.
κρέας	<i>t</i> -less in Homer. Theognis. Herodotus	<i>t</i> -less in tragic authors. Plato. Aristophanes; <i>t</i> in inscr. (4 <sup>th</sup> B.C.). Athenaeus, Herodianus			Attic G.sg. κρέατος 4 <sup>th</sup> B.C.
σέλας	<i>t</i> -less	<i>t</i> -less; <i>t</i> only late in Conon (1 <sup>st</sup> A.D.)			Attic G.sg. σέλατος 1 <sup>st</sup> A.D.
σπέος	<i>t</i> -less. <i>t</i> in Xenophon		Xenophon (?)	Xenophon (?)	artificial(?) Com. Greek(?) σπεάτεσσι 6 <sup>th</sup> -5 <sup>th</sup> B.C.
τέρας	<i>t</i> -less in Homer (Aeolic?). Herodotus <i>t</i> in Herodotus	<i>t</i> -derivatives in Aristophanes. <i>t</i> in Xenophon. Plato	<i>t</i> -less in Alcaeus (but τέρος)		(Ionic)-Attic. Com. Greek(?) G.sg; N.pl. τέρατος τέρατα 5 <sup>th</sup> B.C.

φάος φῶς	<i>t</i> -less in Homer. Archilocus Theognis. Hesiod: φῶς Theognis. Herodotus	<i>t</i> -less in tragic poets. Aristophanes; <i>t</i> in tragic poets. Aristophanes. Plato, etc.	Φάος in Alcaeus. Sappho. Pindar; Φῶς in Alcman		Attic or Ionic-Attic or earlier (Alcman) D.sg. φωτί 6 <sup>th</sup> B.C.
χάρις	<i>t</i> -less form only χάριν; <i>t</i> in Homer (Graces). Hesiod. Herodotus	<i>t</i> in tragic authors		<i>t</i> in Pindar	Ionic-Attic or earlier (Homer, Hesiod)
χρῶς	<i>t</i> -less form in Homer. Theognis. Herodotus. Archilochus; <i>t</i> in Homer. Hesiod	<i>t</i> -less in tragic authors. Aristophanes; <i>t</i> in tragic authors	<i>t</i> -less in Sappho. Pindar(?) <i>t</i> -form in Pindar(?)	<i>t</i> in Pindar	(Ionic)-Attic 8 <sup>th</sup> century Acc.sg. χρῶτα

### Bibliography

- Anghelina, C. (2007): 'A Note on the Greek Perfect Active Participle', *IF* 112, 96–104.
- Athanassakis, A. (1976): *The Homeric Hymns*, Baltimore.
- Aura Jorro, F. (1985–93): *Diccionario Micénico*, Madrid: Consejo Superior de Investigaciones Científicas, Instituto de Filología.
- Beekes, R. S. P. (1985): *The Origins of Indo-European Nominal Inflection*, Innsbruck.
- (1995): *Comparative Indo-European Linguistics*, Philadelphia.
- Benveniste, E. (1935): *Origines de la formation des noms en indo-européen*, Paris.
- Buck, C. D. & Petersen, W. (1945): *A Reverse Index of Greek Nouns and Adjectives*, Chicago.
- Chantraine, P. (1933): *La formation des noms en grec ancien*, Paris.
- (1/1958, 2/1963): *Grammaire homérique*, Paris.
- (1961): *Morphologie historique du grec*, Paris.
- (1968–80): *Dictionnaire étymologique de la langue grecque*, Paris.

- Janko, R. (1982): *Homer, Hesiod and the Hymns*, Cambridge.
- Jeffery, L. H. (1961): *The Local Scripts of Archaic Greece*. Oxford.
- Lesky, A. (1957/58): *Geschichte der griechischen Literatur*, Bern. (English: New York 1956).
- Meillet, A. (1965): *Aperçu d'une histoire de la langue grecque*, Paris.
- Nussbaum, A. (1986): *Head and Horn in Indo-European*, M. de Gruyter.
- (2004): *A -t- Party: Various IE nominal stems in \*-(o/e)t-*. Unpublished Notes from the 2004 UCLA PIE Conference.
- Oettinger, N. (1982): 'Die Dentalerweiterung von *n*-Stämmen und Heteroklitica im Griechischen, Anatolischen und Altindischen', *Serta indogermanica*, Innsbruck.
- Palmer, L. (1980): *The Greek Language*, Oxford.
- Perotti, P. A. (1984): 'Sur quelques participes substantivés grecs et latins', *Les études classiques*.
- Ruijgh, C. J. (1967): *Études sur la grammaire et le vocabulaire du grec mycénien*, Amsterdam.
- (1996): *Scripta Minora I and II*, Amsterdam.
- Schindler, J. (1975): 'Zum Ablaut der neutralen *s*-Stämme des Indogermanischen, in Flexion und Wortbildung', ed. Helmut Rix, Wiesbaden, p.259sqq.
- Schwyzler, E. (1939): *Griechische Grammatik I*, München.
- Sihler, A. (1995): *New Comparative Grammar of Greek and Latin*, Oxford.
- Szemerényi, O. (1967): *Studi Micenei ed Egeo-Anatolici II*, Roma.
- Wackernagel, J. (1916): *Sprachliche Untersuchungen zu Homer*, Göttingen.
- Wathelet, P. (1970): *Les traits éoliens dans la langue de l'épopée grecque*, Roma.
- Whitney, W. D. (1950): *Sanskrit Grammar*, Cambridge.