VARIATION WITH INTRUSIVE *T*
IN
ANCIENT GREEK

DISSERTATION

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BY

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ABSTRACT

Nominal stems ending in *t* are very rare in Proto-Indo-European. Despite this fact Ancient Greek displays a series of nominal stems that end in *t*. Their presence in Ancient Greek suggests that the insertion of *t* in words of PIE origin must be a process which occurred in Greek itself.

From a diachronic perspective these stems fall into two categories. The first is represented by words which display the *t* in their stems in all the historical records we have, both in epigraphical evidence-including Mycenaean-and in literary sources. For this category we cannot trace the moment and the place when this "older" *t* entered the paradigms. The second category, however, contains words that show an allomorphic variation between *t*-ful stems and *t*-less stems. Given the fact that Homer uses in the majority of cases the *t*-less stems one can see, in post-Homeric dialects, how the stems with this "intrusive" *t* coexist with the *t*-less stems and win eventually over. The main goal of the dissertation is to see how this allomorphic variation evolved through historical Greek. Its second purpose is to see what this allomorphic variation can tell us about the origin of the intrusive *t*.

The perfect active participle shows up in historical Greek as a *t*-stem. Nevertheless, scanty evidence from Mycenaean suggested that in this dialect of Greek the

participle may have been *t*-less. The work addresses this problem again and comes up

with the hypothesis that the forms Mycenaean displays might be only adjectives derived

from former *t*-less participles, but not *t*-less participles. Consequently, the *t*-ful participle

may still be a creation of Common Greek.

A last issue regards the *–ti* adverbs in Greek, which have been often considered to

be former locatives of *t*-stems. The study shows that this hypothesis does not seem to be

true and that they are more likely to be the result of an analogical process, which

occurred in Greek and not in PIE.

Dedicated to my daughter, Theodora

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FIELD OF STUDY

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CHAPTER 1

PRELIMINARIES

The objectives of this study are twofold: on one hand, to trace the historical entry

of *t* in some of the *t*-stem nouns[1] which exist in Greek, and to determine when and in

what dialects this process, resulting in what I call here "intrusive *t*", took place, and, on

the other hand, to document and examine the coexistence of *t*-stems with the *t*-less-stems

in various dialects. This dichotomy is a very important one not only because it will show

the allomorphic variation in these words, but also because it will take into account the

double nature of the *t*-stems: some of these stems are likely[2] to have the *t* in their stem as

an archaism[3] dating from the Proto-Greek stage and, therefore, it is probable that they

existed in all dialects, whereas the others have their *t* as a result of an innovation in a

specific dialect and, consequently, cannot be found in all dialects. In this way, the study

takes into account the fact that the variation in the morphological forms of some words is

due to the creation of new *t*-stems, whereas in some others it is due to the appearance of

new *t*-less-paradigms next to the archaic ones represented by the *t*-stems. What is

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[1] As we shall see below there are many other *t*-stems in Greek. Nevertheless, for those others, there are no historical records which show a stage when the *t* was not present in the paradigms of these nominal stems. These stems are, therefore, not the object of this study.
[2] The hypothesis belongs to Benveniste, *Origines de la formation des noms en indo-européen*, Paris 1935, p.32sqq. I start by assuming this hypothesis to be true. See below for this theory.

essential for both cases, however, is the fact that this variation shows that at some point in Greek the paradigm of the *t*-less-stems came to be mixed with that of the *t*-stems. This is due, as we shall see, to the fact that the nominative of the *t*-less-stems was identical with that of the *t*-stems.

These considerations exclude from the start as object of the analysis the *t*-stems for which there is no morphological variation attested in historical Greek dialects between them and the corresponding *t*-less stem. I also exclude from the analysis words for which we can see different stems for different classes as defined by certain grammatical categories, for example gender, as with the masculine λέων, λεοντος, a *t*-stem and the feminine λέαινα, a *t*-less-stem[4], and where there is no attested morphological variation within that class of that particular grammatical category.

T-stems, i.e., nouns whose stems end in *t*, are very poorly[5] represented in PIE; the only *t*-stems which are of PIE date are: the word for "honey", Gk μέλι, μέλιτος, Hitt *milit-*, Luw *mallit*, Alb *mjaltë*, Goth *miliþ*; the word for "face", *hant-, which gave Gk ἀντί, Lat *ante*, Ved *anti* ("near"), Hitt *ha-an-za* ([hants]) and which was preserved as such only in Hittite, the other IE languages showing forms which go back to a locative *H$_2$enti "in front of"; the word for "grandson", Lat *nepōs, ōtis*, Skt *napāt-*, Gk ἀνεψιός< *H$_2$nept-yos. Beside these there are stems in –*nt*-, which are mentioned below.

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[3] By "archaism" I understand here that these stems belong to a very early stage of the language, namely to Common Greek. "Innovation", on the other hand, would be, in this view, the entry of *t* in one of the subsequent dialects.
[4] Λέαινα<*le-n̥-ya; *le-n̥t-ya would have given *λέασσα
[5] See, for example, Beekes, *Comparative Indo-European Linguistics*, Philadelphia 1995, p.178.

Greek, on the other hand, shows various nominal stems in *t*, but their *t* is not of PIE date. In other words, *t* in these words is a Greek-internal[6] matter and is treated as such throughout this dissertation.

As stated above, among these stems in *t* one can notice that, for some, the insertion can be traced back in the historical period from the texts or epigraphical evidence we have, whereas for others we cannot do this, because the *t* insertion occurred in prehistoric times and, therefore, there is no way one could find a form of such a stem before the *t* entered its paradigm. Some examples illustrating this would be, on the one hand, the word for "horn", κέρας, which appears both as a theme in *t* and one in *s*: for example, the genitive singular displays both κέρατος and κέραος[7]. On the other hand, for a word like ὄνομα, ὀνόματος = "name", one cannot find anywhere in Greek a token which does not have the *t* inserted into the paradigm, although we know from the other IE languages that the word was not a theme in *t*: Sk *nāma*, *namnás*, Lat *nomen, nominis*, etc. Given these observations we can now divide[8] these words into two big classes:

A.   Words for which we cannot determine the point in time when the insertion of *t* took place and words with suffixes ending in a *t* of PIE date[9]:

1. Participles (a) and other words (b) in -ων, gen. -οντος or -ας, gen. -αντος:

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[6] This goes especially for nouns and less for participles, see below.

[7] 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.

[8] The best source for doing this is Buck & Petersen, *A Reverse Index of Greek Nouns and Adjectives*, Chicago 1945.

[9] The stems themselves are *t*-less in PIE; some PIE suffixes, however, end sometimes in *t* as is the case with the participial ending –*nt-.

a. -ντ- participles: present, aorist: type φέρων, φέροντος; Skt. *bharan*, *bharantas*

b. λέων, λεοντος (but fem. Λεαίνα< *lewnjH$_2$), δράκων, -οντος, ὀδούς, -οντος, γέρων, -οντος, ἄρχων, -οντος, etc. Sometimes these forms are considered to be participial forms[10], this is the reason why I group them here along with the participles, although some of their etymologies are not clear.

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

2. Gk. neuter words in -μα: ὄνομα, ονόματος. Skt *nāma*, *namnás* and Lat *nomen, nominis* show that there was no theme in *t* in PIE.

3. Words ending in –εις<*- Fent*s*, -εσσα<*-Fentya, -εν<*Fent. The suffix - Fεντ- corresponds to Indo-Iranian –*vant*-: ἀστέροεις, χαρίεις, Skt *rūpa-vant* = "having beauty", etc.

4. Words with the abstract noun suffix –της, -τητος (Doric –τας)< PIE –*tāt*-, cf. Skt –*tāt*- as in *sarvatāt* = Av. *haurvatāt* = Grk. Ὁλότης = "*wholeness*"[11].

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

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[10] See Chantraine, *Dictionnaire étymologique de la langue grecque*; also Perotti, Pier Angelo, "Sur quelques participes substantivés grecs et latins", *Les études classiques* 1984, p.1-7.
[11] These latter suffixes can be "decomposed" into *-wen-t and *-teH^2-t, so that they show "intrusive *t*". Nevertheless, this process occurs at the PIE stage and is thus irrelevant to the Greek-internal *t*-insertion phenomenon.

B. i) Words in which we can follow the insertion of *t* in their paradigms and thus witness the process of its lexical spreading. These are not very many, and we can follow the way the *t* enters their paradigms in various dialects.

ii) Words which originally were *t*-stems, according to Benveniste's theory[12], but which switched to another declension type and, therefore, present the same variation as the nouns in *i*.

iii) The Perfect Participle Active, εἰδώς, ότος, is present in Mycenaean without *t* and, therefore, enters this category.

This work addresses only the B-category. The words in question[13] are the following: Ἅλας "salt", Ἄρτεμις "Artemis", χρώς "skin", ἔρως "love", γῆρας "old age", γέρας "gift", γέλως "laugh", γόνυ "knee", δέος "fear", δόρυ "spear", δέρας "skin", δέπας "cup", ἱδρώς "sweat", κέρας "horn", κρέας "meat", σπέος "cave", κνέφας "cloud", τέρας "monster", χάρις "grace", σέλας "light, brightness", φῶς "light".

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

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[12]See below p.11.
[13] See the end of this chapter for other important words to the issues taken up here.

Methodology and Objectives

To study the B-category words, it was necessary as a first step to establish as exhaustive a list as possible of relevant forms in all Greek dialects, including Mycenaean. Buck & Petersen's language index is the tool used to find out these *t*-stems.

The next step, which actually makes up the core of this research, is, on one hand, to see when the *t* enters the paradigm of these nouns and leads to allomorphic variation between the "older" t-less stems and the "newer" *t*-ful stems, on the other, to analyze how the "older" *t*-stems coexist with the "new" *t*-less stems. For this I use all the forms found in Greek literature and also in inscriptions, namely the forms which belong either to the *t*-less or to the *t*-ful paradigms. Each word is treated separately. Basically, what I do here is to extract from the Liddell-Scott Lexicon and the TLG[14] both the *t*-less and the *t*-ful forms of the words in question and to see, on one hand, when and where (in what author and dialect) the *t*-stems occurred for the first time and, on the other, when the *t* is an archaism, when and where the *t*-less forms occurred. For the *t*-stems I determine then, to the extent possible, whether the first appearance of such a *t*-stem in a certain dialect is a matter of borrowing or represents a phenomenon which belongs just to that particular dialect. In other words, I consider whether, given that there might be other dialects in which this stem can be found, the appearance of *t* is due to a common heritage from a previous mother-dialect or whether it is a matter of a borrowing of some sort[15]. For this purpose it is crucially important to see what happens in all dialects. A form appearing in

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[14] *Thesaurus Linguae Grecae*, on CD, Irvine, California.
[15] There can be literary borrowings in addition to the "normal" borrowings, which spread from speech community (dialect) to speech community.

dialects A and B could well have 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 in Attic then the default conclusion that the comparative method gives is that the theme appeared at least by the time of the Ionic-Attic unity, unless we can find some proof that the theme was borrowed later from one of the dialects[16].

An important step of this research is to see how the parallelism between forms evolved with time in respect to each other, namely whether one form became more predominant with time or not, and, at the same time, to establish what happened to the "old" forms, that is to say whether they were lost immediately or whether 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 in Greek, 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[17]. 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. Another

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[16] The claim may seem too strong, since independent innovations are not entirely excluded. Nevertheless, as we shall see, in our cases the possibility of independent innovations is reduced. This is, on one hand, because sometimes a form is met in more than two dialects (Ἔρως, χάρις, etc.). On the other hand, sometimes the innovations include many features, e.g., χρωτός presupposes also that the innovation started from the nominative form. All these facts increase the likelihood of our hypothesis. My claim is not a general one, but it applies to the particular cases we are dealing with here.

[17] By the "center of spreading" I mean the fact that it might be that in one dialect the *t*-stem is met more often than in another, so that it probably appeared first in that dialect; then the splitting up of those dialects resulted in a partial suppression of the *t*-stem in the second dialect.

central objective of this research is to establish for these themes the time of spreading, the

place of spreading (in what dialect) and the point from which the spreading took place. 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[18] that the Greek *t* in neuter nouns in –*mn̥*(type ὄνομα, ὀνόματος<

<*H₁nomn̥) spread from the ablatival suffix -*tos*[19]first to the genitive and then to other

cases, with the *t* being reinterpreted as part of the stem and not of the ending.

To sum up, there are two kinds of stems we are dealing with here: on one hand the

stems that are originally *t*-less stems and acquire the *t* later, during historical Greek and in

certain dialects only, and, on the other hand, the *t*-stems which have acquired their *t* at a

very early stage of Greek, in the prehistory of Greek, but then change to a non-*t*-stem in

historical Greek and display a morphological variation between the *t*-less and the *t*-ful

stems.

Stems with later *t*-insertion

This process is a morphological change which affects certain words in Ancient

Greek: a *t*-insertion in words which previously were not themes in *t*. The most important

fact here is that the insertion left traces of the former *t*-less stems, which can still be

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[18] Oettinger, "Die Dentalerweiterung von *n*-Stammen und Heteroklitica im Griechischen, Anatolischen und Altindischen", *Serta Indogermanica*, 233-245.
[19] It is represented in Sanskrit in adverbs like *ta-táḥ*. On the other hand, Greek has the adverbs ἐντός, ἐκτός of the same origin.

found in certain dialects. For example, a word like κέρας has the "older" genitive

κέραος<*κέρασος or even (via contraction) κέρως, which is the normal result of the

inflection of a consonantal *s*-theme, but the "younger" form is κέρατος, which is the

genitive of a *t*-stem κέρατ-. The fact that the original PIE form was without *t* is shown,

for example, by Sanskrit, for which *śiras* is the word for "horn". One can view 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 were taking place between the vowels of the stem and the ones of the endings. The

Attic κέρως[20] would be a good example in this respect. Of all the words which this work

takes into consideration, κέρας and κρέας = Skt *kraviḥ* are the only ones for which we

can assert with certainty that the PIE form was a *t*-less one.

Thus, from a modern perspective, in which we have the advantage of knowing

what happens not only in Greek, but also in other IE languages, we can assert that the

original forms were ones that did not have the *t* in their stems. This is obvious by

comparing the Greek with other IE languages. The IE comparative perspective, however,

was not something the ancient grammarians had the advantage of. Thus it is interesting to

see what these grammarians believed about this morphological change. The most

important information we have about this belongs to the grammarian Aelius Herodianus,

in the 2nd century A.D., who asserts in his work Περὶ κλισέως ὀνομάτων that the

nouns which end in Greek in –*as* have *t* in the paradigms of Attic dialect and no *t* in Ionic

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[20] α+ο→ω in Attic as a result of the so called "Attic contraction".

dialect. From what follows we see that the Greek grammarians had a good knowledge about the dialects of Greek and that they were sensitive to the dialectal differences, but their interpretation of the facts lacked the sense of historicity given by the comparative perspective. Let's see then what Herodianus has to say[21] about the existence of the *t*-stems:

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

The translation of this passage is as follows: "…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 change to *–os* like δέρας δέρος, κῶας κῶος, γῆρας γῆρος, and the neuters in

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[21] Περὶ κλισέως ονομάτων, 3,2.772 sqq; the same opinions are found in the 4-5th century A.D. grammarian Choeroboscos (citing Herodianus), *Scholia in Theodosii Alexandrini*, 1.353sqq.

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–*os* decline through pure –*os* like βέλος βέλεος, τεῖχος τεῖχεος, 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 the *t* like in κρέατος κρεαος, γήρατος γήραος, κέρατος κέραος. And the ones in Attica contract the α and ο into ω and pronounce barytonically κρέως, γήρως, δέρως…"[22]

As we can see, Herodianus sees the order of facts in a reverse way: he believes that, for all the neuters with the nominative in –*as*, the original stems had *t*, whereas the Ionic forms without *t* are due to the dropping of *t* in their paradigms. Aside from this observation, which may or may be not true[23], Herodianus's account is important for us because he recognizes a very important fact: people from different dialects had different preferences, and they were using different forms in their speech. This sets the tone for the research that follows. I try to see how these different forms coexist with each other, whether different dialects were using only certain forms the way Herodianus accounted for them or whether, at least in some words, the same dialect could use both forms.

The representative words for this part of our classifications are all the words I have enumerated with the exception of the neuters with the nominative singular in –*as*. Moreover among these there are at least two about which we are sure that they were not *t*-stems in PIE: κέρας and κρέας.

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[22] Since I could not find any translation of this work, the translation belongs entirely to me.
[23] Our research will answer this question later.

The *t* as an archaism of Proto-Greek

The previous considerations apply to the situation where the *t* is an innovation, in the cases in which the original stems were *t*-less and then, for some reason, the *t* enters the paradigm. The other situation is when the *t* is an archaism and belongs to a very early stage in Greek language[24], whereas the *t*-less-paradigm is the one which was later created, most likely by analogy. In these cases the strategy I follow is reversed: the "newer" forms are those without *t* and, consequently, my goal is to establish when and in what dialects these forms occurred. Then I examine the way in which these new stems coexist with the "older" *t*-ful stems. The principle, however, is the same: to establish which stems are older and then see the way the various forms coexist throughout centuries.

The fact that the *t* in some of these *t*-stems might be older than other allomorphs was noticed as early as the 2nd AD grammarian Herodianus, who believed that the Ionic dialect lost the original *t* in some *s*-stems and the Attic dialect uses the one in which it was original. We will take a closer look at this opinion and see whether we can judge its validity or not.

In the terminology of modern historical linguistics, Herodianus raises a problem which is well known to linguists: given two forms of the same word in the same language, which one of them is an innovation and which an 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

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[24] See note 3.

the neuters with the nominative in –*as*, represent an older aspect of Greek and, therefore, in modern terminology, are archaisms.

If the *t* might be an archaism, then a new legitimate question arises: what is its origin, since there is no conclusive evidence for *t*-stems in PIE? Another important question regards the way Ionic lost the *t*, if this is the case and Herodianus was indeed right.

Benveniste gave a partial answer[25] to all these issues in his brilliant book, *Origines de la formation des noms en Indo-Européen*[26]. According to him, the neuter stems ending in –*as* in Greek are former neuter stems ending in –*r*, which displayed in their paradigms the PIE alternation *r/n*. The *n* then is assumed to have vocalized when it was interconsonantal within the paradigm. In Greek we can still see this situation in words like ἧπαρ, ἥπατος where the original PIE form is assumed to have been *yēk^{w}r̥ the nominative. The alternation *r/n* then would have worked through the rest of the paradigm: the genitive, for example, would have been *yak^{w}n̥(t)os>Gk ἥπατος, Skt. *yaknas*, Lat. *iecinis,* where the α in Greek is the result of the vocalization of *n̥.We can also see that Greek displays a *t* in this paradigm; this fact is similar to what we find in the stems in *–mn̥ of the type ὄνομα, ὀνόματος. The *t* itself in the paradigm of this latter type is obscure and still remains until today an unsolved problem, with which we will not deal here. What does matter for our purpose is the fact that the inherited PIE alternation

[25] Schwyzer, *Griechische Grammatik*, 514, n.6, is skeptical about this, considering that Benveniste went too far with his speculations.
[26] Paris 1935, p.34sqq.

r/n lies in Greek at the heart of the suffix *–at-*, whose *a* originates in a vocalized *ņ and ended up being treated as a unit, analogically, as seen in words like γόνυ, γούνατος.

Benveniste's main argument for such a solution is the existence in Greek of traces of this old alternation between *r* and *n*. A word like γέρας would have had its original form *γέραρ and, consequently, its genitive would have been γέρατος, in the same way we saw above that ἧπαρ had the genitive ἥπατος. The proof for this is the existence in Greek of several words in which the old *r* still shows up: γεραρός, γεραίρω<*γεραριω. On the other hand, traces of the alternation with –*n- can be seen in words γεραίνω or γέρων. Benveniste considers that all the neuters in *–as* in Greek are actually the result of this passage from former *–ar* stems to *–as* stems, with the exception of κρέας and κέρας, whose IE cognates show that the α is a former PIE laryngeal: Gk κρέας corresponds to Skt *kraviḥ*; Gk κέρας< *ḱerHs, Skt *śiras* < *ḱŗHos. There are other words which might display the same alternation. Τέρας has a doublet τέλωρ (presumably a dissimilation from*τερωρ), which, in turn, might have coexisted with an ablaut variant *τέραρ, in the way Greek has the doublet τέκμαρ-τέκμωρ; τέρας then in the nominative would be the result of a dissimilation process and the genitive τέρατος would be the reflex of the older form which showed the alternation *r/n*. Another word of such sort could be σέβας. There is an adjective in Greek σοβαρός, which suggests a stem *σέβαρ. In this way we can explain the adjective σεμνός< *σεβνός, which, again, reflects the alternation *r/n*. Ψέφας points

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to an older *ψεφαρ attested in ψεφαρός. Πεῖρας, on the other hand, does have a

historical variant πεῖραρ and the alternation is clearly seen in the verb περαίνω<

*peranyō. Δέμας must have had a doublet *δέμαρ 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 still displays the *n*-form 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., which are themes in –*es*- of the type

γένος. We also met in our research such variants: τέρεος, κρέους, etc. They are nouns

in –*as* passed to a γένος-type declension.

These are, in short, the considerations Benveniste made about the origins of the

neuters in –*as*, and his arguments are very strong. Nevertheless, he does not go into more

detail or offer explanations for the other forms, namely the ones which are not archaisms,

but innovations. In other words, he did not answer the question regarding the origins of

the declension of the *t*-less variants in some dialects: τέραος instead of τέρατος,etc.

Herodianus, on the other hand, provides us with a solution here: the *t*-less stems appeared

as a consequence of dropping the *t* from their paradigms. Is it so? And, if this is the case,

what was the mechanism of dropping? When did it happen in the history of Greek and in

what dialects?

Our research might be able to provide us with the answer. I think we could choose

between several hypotheses here. The first one, the classical, would be that at some

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unidentifiable point in time Greek innovated in paradigms of the type τέρας and formed

a genitive after the model of the consonantal stems by adding the ending to the theme:

*τέρασος became the genitive of these nouns. And then the *s* dropped in Greek (in all

dialects!) and Ionic chose the *t*-less variant, whereas the other dialects retained the more

archaic form. This solution is a handy one, but it has an inconvenient aspect: since the *s*

dropped intervocalically before the split of Ionic and Attic, we have to suppose that at

some point in Attic the *t*-less forms coexisted with the *t*-variants. This is not impossible,

but our research has shown that there is a clear cut between Attic and Ionic in this

respect. Moreover, Herodianus confirms this fact, namely that in Attic there was *only* the

form with *t*. There are some doubts here, however, which are cast by the existence in

Attic of forms like (genitive) γήρως or κρέως (with -ως< *-α-ος), which might be

the relics of the time when these forms coexisted. This is as much as we can say right

now about this point of view.

The other solution goes along with Herodianus' assumption: the *t* was dropped in

Ionic. We need then to establish the causes of this process. It would be hard for anyone to

hold that this process was a phonological one due to some weakening which led

eventually to the total loss of the *t* given that intervocalic –*t*- is otherwise maintained in

Greek. More likely here it is the fact that the process was a morphological one, i.e.,

analogical. The only analogy which could have worked here is the one with the stems

which did not originally have the *t* in them, namely with words like κέρας κρέας, etc.

These stems have originally the genitive *κρέασος>κρέαος, *κερασος>κέραος. It

is possible then that things happened the way Herodianus told us to have happened: the

analogy[27] based on the equation τέρας- τέρατος vs. κρέας- κρέαος created a new

genitive for the type τέρας, namely τέραος with the dropping of *t*. The same equation

worked in a different way in Attic: it was the archaic type τέρατος which prevailed[28].

This view is also supported by the fact that, at least in the case of κρέας, the theme in *t*

appeared very late, which shows a certain resistance of the words that were originally *s*-

stems. We can see now that Herodianus might have been right in his assumptions: Ionic

might have been the dialect which dropped the *t* from the paradigm. Nevertheless, as I

said above with regard to the first solution, a coexistence of the two variants during the

older forms of the language cannot be excluded.

Before getting into the actual analysis of the words mentioned, we need to take up

an issue here which is important in general for the neuters ending in the nominative

singular in *–as*. Although there are many words of this sort in Greek, the reason why we

do not take them into account is quite simple: they do not display at any time, in Greek, a

t-stem. These words are: δέμας, σέβας, οὖδας, κτέρας, σκέπας, ἔρας, ψέφας,

σφέλας, κῶας, βρέτας, λέπας, λίπας, κλέπας, κλέτας. It would be interesting

to see what forms various dialects use for these words.

- Βρέτας "wooden image of a god" appears in more forms, but, again, is declined

like an *–os* neuter:the dative βρέτει (A.Eu.259), the nominative/accusative plural

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[27] The Aeolic forms like τέρεος are not very helpful, because they only show the passage from one type of declension, namely the *–as* type, to that of γένος. This process could be very old since we have it in Ionic as well. On the other hand, even the doublets Benveniste mentioned support this idea.
[28] Our research shows that this happened relatively late in Attic.

βρέτεα (A.Supp.463), βρέτη (A.Th.95, etc), the genitive plural βρετέων

(A.Th.97,Supp.429), 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*- ἔραννός "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 (Od.1.291 and 2.222; Il.24.38) and Moschos

(Mosch.4.33); the genitive plural is κτερέων (Od.5.311, Epigr.Gr.514), the dative plural

κτερέεσσιν (A.R.1.254).

- Κῶας "fleece" is treated like the –*os* neuters: κώεα (Il.9.661, Od.23.180) is

nominative/accusative plural; the dative plural κώεσι (Od.3.38, etc).

- Λέπας "rock" is used only in nominative/accusative singular and, therefore, is

not relevant.

- Λίπας "fat" has the genitive singular (Aret[29].CA.1.1) λίπαος and the dative

singular λίπαϊ (Aret.CA.1.1).

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[29] Aretaeus Medicus, the 2nd century AD.

- Οὖδας "earth" displays the genitive οὖδεος in Homer (Il.12.448, Od.9.242)

and the dative οὖδει in Homer (Il.24.527; 5.734; 8.385) or οὖδεï (Il.23.283,

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 (Od.17.231), the dative

σφέλαï (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*-themes (neuters in -*as* or –*os*) in most of the dialects.

We can begin now, in the next chapter, our research about the words which present allomorphic variation between *s*-stems and *t*-stems. The words are presented alphabetically.

CHAPTER 2

INTRUSIVE *T* IN GREEK STEMS

1) Ἅλας

Ἅλας, "salt", is, probably[30], formed from the accusative plural of ἅλς, ἁλός.

How old it is we cannot know. It is a neuter noun and displays only the *t*-stem, but this

happens very late, in Bolus Med. Et Phil., in the second century B.C. (ἅλατι in *Ad*

Leucippem 2.54.24), although Aristotle uses it for the first time as a neuter noun[31]

(Mir.844^b 16), but not in the oblique cases. This fact shows that, beginning at least with

koine, there was a tendency to introduce *t* in words having *–as* in the nominative singular.

Conclusions:

This a word which seems to be created late, from the accusative of ἅλς, and its

t-stem allomorph shows up first in the 2nd century B.C.

2) Ἄρτεμις

Ἄρτεμις has stems both in –ιτ- (SIG 765, Doric in Rhodes; in the 2nd B.C. at

Delphi, SIG 671 *A*6- Ἀρτέμιτι; in Mycenaean *Atemito*=Ἀρτέμιτος, dative

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[30] See Chantraine.
[31] Ἅλς, ἁλός is masculine.

Atimite=Ἀρτεμίτει) and in –ιδ- (SIG VII, 546 in Boeotia; H. Ven.16 has the accusative

in-ιδα). Also there is a form Ἄρτεμιν for the accusative (H.Ap.15, Pi.frg. Paean 52 d.1,

etc.). A dative Ἄρταμι shows up in Argos (IG 4.577). In Doric there is also a name of a

month Ἀρταμίτιος[32] (Th.5.19).

Conclusions:

The *t* in this word is old, Common Greek, since it shows up in Doric and

Mycenaean. The *t*-less accusative and dative forms continued to exist.

3) Γέλως

This word appears in Homer only without *t*: the dative singular γέλῳ at σ 100,

the accusative singular γέλω at σ 350, υ 8, 346.

In the Homeric hymns we meet the compound form ἡδυγέλωτα, which shows

up in the first hymn to Pan (37), but this was composed later, in the 5th century.

The first time the theme in *t* shows up is in Aeschylus[33], (Ch. 447), where we find

γέλωτος. Thespis[34] still uses the accusative singular γέλων[35], which is, probably, a

reinforcement of the accusative ending with ν (3.2). Pythagoras has the form γέλωτι.[36]

In the 5th century the forms with *t* are more and more numerous: Thucydides

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[32] Chantraine, ibidem, inclines to believe that this is a proof for an original *t*-stem. Nevertheless things are far from being clear. See below.
[33] We deal here with authors living at the end of the 6th century A.D. and the beginning of the 5th.
[34] He was an Athenian.
[35] The Homeric manuscripts hesitate between γέλω<*γέλοα, γέλον and γέλων. See Chantraine, *Morphologie,* p.72.
[36] We need to be cautious here, because the word is mentioned by D.L. (88.22-4).

(4.28.5.1) has γέλωτος, Euripides (Melanipp.Capt. 492.1, 5) has γέλωτος and

γέλωτι, but he also has one instance of γέλων (Med.383). Sophocles generally has the

t-stem, but he has γέλων in Aj. 303 and Ant. 647. Aristophanes makes use of both

γέλων (Vesp.1260) and γέλωτα (Av. 732), whereas Xenophon and Plato use only the

 t-stem. In the Ionic dialect Herodotus uses only the theme in *t*, for example, γέλωτα at

2.121, 3.29.7, and Hippocrates does the same. In the 4th century, Apollonius has γέλω at

Arg. 4.172, but this probably is due to Homeric influence.

Conclusions:

a) The theme in *t* is not used in Homer

b) It appears first in Aeschylus and Pythagoras and it is used consistently

afterwards in the Attic dialect. In the Ionic dialect it is not so richly represented. Its use in

Herodotus could be an Atticism, and it could be so in the case of Hippocrates[37] and

Pythagoras too.

c) The only older form which shows up after Homer is the accusative singular

γέλων[38]: Thespis, Euripides, Sophocles, Aristophanes and Apollonius (hexameters) are

such examples. It seems that this form was the last one to be replaced and, in any case,

the most resistant to being removed. It seems, then, that the *t*-theme of this word is an

Attic innovation.

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[37] Under this name there are works from different centuries and dialects.
[38] The case is almost similar with what happens with χάριν.

4) Γέρας

Γέρας has a different story. There are almost no indications[39] of a theme in *t*.

The only[40] evidence of a theme in *t* is its mention in the work of Aelius

Herodianus in the 2nd century A.D., cited above.

The forms are given below.

Γέρα, with short α by apocope, is either nominative or accusative plural; it

shows up in Homer (B237, I 334= δ 66); in the 6th century in Aeschylus (Pr. 82, 107,

229, 439) and in Heraclitus; in the 5th century in Thucydides (1.25.4.2), Euripides (Ph.

874, where the form is not apocopated, with long α), Sophocles (OC1396), Plato (among

others in Resp. 414 a 4) and the list continues until even Philo Judaeus (Mos. 1.321.1) in

the 1st B.C. and beyond[41].

Γέραων appears as early as Hesiod (Th 393, 396) and in the hymn to Demeter

(311) and continues in the 4th century with Theocritus (22.223). A contracted form

γερῶν appears in Thucidides (3.58.5.5).

The genitive singular doesn't show up until Xenophon[42] and then with its

contracted Attic form γέρως (Ages 1.5.8).

The dative plural has several forms: the Aeolic γεράεσσι in Hesiod (Th. 449)

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[39] The nominative plural γέρα is still in use today.
[40] Its occurrence in IG 14.1389 i29, γέρατα, is based on conjecture, the inscription (2nd century AD) showing clearly γέραα.
[41] Even Plutarch, in the 1st A.D., uses it extensively (for example in Sert. 14.4.4)
[42] 5th century BC.

and Theocritus[43] (Id. 17.109) and γέρασι in Thucydides[44] (1.13.1.4).

A different form of the root (with "regular" neuter *s*-stem inflection) in oblique cases appears in the Ionic dialect: Herodotus uses the nom/acc. Pl. form γέρεα (2.168, 3.142, etc), which also shows up on a inscription from Miletus dated around 300 BC (SIG 1037); the contracted form γέρη appears in SIG 1025 (Cos) and is dated also around 300 B.C. Menecrates uses γερέων, the genitive plural, and so does Dionysus of Halicarnas in 1 B.C. (AR 1.48.310).

Conclusions:

a)   Γέρας appears in the overwhelming majority of occurrences as a theme in *s* in all dialects, including Attic. This is in contrast with Benveniste's theory, according to which γέρας is a word that was originally an *r/n* stem, with *r* in the nominative.

b)   The only reference we have for a theme in *t* is found in Herodianus, in the 2nd century A.D.

5) Γῆρας

This is a word which, like γέρας, also displays most of the time only the theme in *s*. In Homer we find a dative singular γήραϊ (Γ150, E 153, etc) and another one (for

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[43] We can see clearly here the influence of epic poetry.
[44] This shows the first occurrences of these forms.

which we cannot say whether it was contracted[45] or not) γήρα, about which ancient

grammarians said they had *ā*, due, probably, to the contraction of –αει, where the

–ει would represent an old dative desinence[46]. A genitive γήραος appears at X 60, Ω

137, etc. and also in Hesiod (Op. 331). The dative γήραϊ also appears in Hesiod (Op.

705).

Γήραος, the genitive singular, shows up throughout the centuries in all dialects.

In the 7th century it shows up in Archilochus (Fr.188.2), Mimnermos (Fr.2.6). In the 6th

century it occurs in Theognis (1.527) andPindar (Frg. Oaian. 52a.1). In the 5th century is

found in Herodotus (3.14.40) and Plato (Resp. 328 e6); and the list continues in the

subsequent centuries. A contracted form γήρως[47] occurs in many dialects: in Sappho

(Fr.S260.1), Theognis (1.174), Anacreon (Epigr.9.716.1), Euripides (Alc.412), Sophocles

(Ant 608), Plato (Alc.1.122.b 2), etc. The largest number of examples of the contracted

form comes from Attic and, besides, the form is not met in Homer. Probably because of

these reasons Chantraine believed that the contraction was Attic. But, as the evidence

shows[48], the contraction seems to have occurred earlier and has a chance of being at least

Ionic-Attic. Homer has only a few examples (4) with the uncontracted genitive, and in all

those cases γήρως would have fit the meter as well[49]. But there is also in Homer a

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[45] It could be a scribal preference, especially if the scribes were from Attica; for example in line λ136:
γήρα ὕπο λιπαρῷ ἀρημένον ἀμφὶ δὲ λαοὶ, γήρα could be scanned as γήραϊ with elision before
vowel. Nevertheless, there are cases in Homer where σέλαι is scanned in two syllables, i.e., Θ 563.
[46] See Chantraine, *Grammaire Homérique*, 50.
[47] The contraction is considered to be Attic by Chantraine, *Dictionnaire Étymologique*; it seems that the
evidence shows something else as will be shown below..
[48] It is hard to explain how it got into Sappho. See below.
[49] Οδ 15.246 παντοίην φιλότητ'· οὐδ' ἵκετο γήραος οὐδόν. As we can see, γήρως would have
fitted the meter without problems.

contracted adjective in the nominative, ἀγήρως (M 323, P 444, Θ539,

etc.)<*ἀγήρασος[50] which shows that, perhaps, the forms coexisted after the contraction

had taken place[51] in Ionic-Attic. In this case, my supposition is supported by evidence

shown in different dialects.

Sappho's case shows more than this, namely that the contraction in this word

could have taken place before the Aeolic and Ionic migrations[52]. The dative γήραϊ

appears as often as the genitive: in the 6th century in Pindar (N7.99) and Ibycus (Fr.6.6);

in the 5th century[53] in Sophocles (γήρᾳ in Aj.507), Herodotus (6.24.7), and Plato (γήρᾳ

in Resp. 329 c 6); and the list continues in the following centuries.

A special problem is posed by the adjective ἀγήραος, which comes from

*ἀγηρασος, and can be found in Homer in the formula ἀγήραον ἤματα (ε 136, η

257, ψ 336). Ἀγήραος also appears in Hesiod (Th. 305, 955) and in the *Hymn to

Demeter* (260). It is also found, rarely, in the 7th century in Stesichorus, in the 6th century

in Pindar (P2.52), and in the 5th century only in Hellanicus (002 1a,4, F.19b,4) and

Antisthenes (002 52b.2). Beginning with the 6th century, a form with *t* appears in

Simonides of Ceos (Epigr.7.253.4), ἀγηράτῳ. Then it appears more often in the 5th

century in Sophocles (Fr.972.1), Xenophon (Mem 4.3.13.9), Plato (Ax 370d3), Lysias

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[50] It is unclear what the suffix is in this case: see Chantraine, *Grammaire Homérique*, p.49. Nevertheless, it is probable that the formation of this adjective belongs to the type of compounds described by Chantraine, La formation, p.13sqq: θρίξ- εὔτριχος, ὄνυξ- γαμψώνυχος, etc.; γήρας- *ἀγήρασος would then fit into this category.

[51] The claim can be made, of course, that the contracted form in Homer is an Attic feature. Nevertheless, the use of not contracted forms in, for example, Plato shows that it is most likely that we deal here with the coexistence of such forms.

[52] Nevertheless, in the case of Sappho, a dialect borrowing cannot be excluded.

[53] Sometimes the references are selected among many others as it is the case with Sophocles or Euripides.

(Or 279.5). Aristotle uses it in the 4th century (Cael 270b2). Nevertheless, this kind of adjective in –to- may be older than our data lets us see. A parallel example can be seen between ἀνίδρωτος and ἀνίδρως[54], with the latter being found late, in the 2nd century A.D., in Ruf. Ren.Ves.6.2 and Aret.SD 1.16, 2.7, whereas the former is found in Xen. Cyr.2.1.29. Other adjectives like Homeric ἀνούτητος, ἄβλητος, etc. are old formations of the same type, so that we cannot tell whether they are derived from themes in *t*, but rather as a very old type, which is found in PIE[55]: adjectives in –to-, the majority being derived from verbs. In this case the verb could have been γηράσκω. On the other hand, however, coincidentally or not, the appearance of the –to- adjective is paralleled by the insertion of the *t* in the declension of γῆρας. This happens for the first time in Isocrates (Fr. 21.2, γήρατι). After this, the theme in *t* is very rarely found, the theme in *s* appears instead as shown above. The next occurrence of the *t*-theme is only in Aelius Herodianus in the cited context. Consequently, it may be that ἀγήρατος reflects the appearance of the *t*-theme for this word.

Conclusions:

a) Γῆρας appears as a theme in *t* first in Isocrates, in the 4th century B.C., and thereafter is mentioned only late, in 2nd century A.D., by Herodianus. During all this time the theme in *s* continued to be used, including the Attic dialect.

b) The adjectives ἀγήρατος and ἀγήραος also coexisted. The first time the

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[54] See chapter 3.
[55] See Chantraine, *La formations des noms en grec ancien*, Paris 1933, p.302 sqq.

theme in *t* is used is in Simonides[56] of Ceos and then it appears quite often in Attic. The forms without *t* appear sporadically in the 5th century with Hellanicus, who is from Mytilene (Lesbos), and Antisthenes from Athens.

c) Γῆρας is a word whose etymology[57] is related to γέρας and, consequently, may have been an "*r/n*" word originally, although there is no certainty about this fact. Thus the only conclusion that can be drawn is that this word displays a situation similar to γέρας and, given the etymological relation between them, may have followed the same path. The adjective ἀγήρατος could be an older type that was probably present in Common Greek. The word γήρας doesn't say too much about this since the theme in *s* was used in all dialects. From Herodianus' point of view, it seems that by the 2nd A.D. the theme in *t* was predominant in Attic. Nevertheless, our data shows that the themes in *s* continued to exist in parallel and, moreover, to be predominant in most dialects, including Attic, at least in the Classical period.

6) Γόνυ

The word displays two forms in Homer: both the one without *t* and the one with *t*.

The genitive singular γουνός< *γονϝός[58] at Λ 547 and τ 450; the form

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[56] Simonides is an Ionic writer, but his language is artificial and contains elements from all dialects. The basic features are Doric, the dialect of the choral lyric he writes. In this way, the *t* theme may not be only Ionic. In addition to this, the island of Ceos was largely populated by people from Athens; see L. Palmer, *The Greek Language,* p.128 and A. Lesky, *A History of Greek Literature*, New York 1956, p. 184.
[57] See Chantraine, *Dictionnaire*. The origins of the long vowel in the stem are still in debate; among the most plausible origins is that it was derived from the old athematic aorist ἐγήρα. Sanskrit has the short vowel in *jāri-man* = "old age", but long vowel in the Vedic sigmatic aorist *jāri-ṣuḥ* (3rd pl.)
[58] These forms are, of course, the result of compensatory lengthening: ου is a spurious diphthong.

γούνατος, with the –*at*- extension appears at Φ 591.

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

The form γοῦνα of the nominative and accusative plural appears in Ζ 511, Ξ 468, Ο 268, Υ 93, Φ 611, Χ 204, 452, Ψ 444, ζ147, ι 266, σ 395, υ 352. Among all these occurrences there is none which could have been replaced in the hexameter with γούνατα. Γούνατα, on the other hand, appears 45 times in Homer, sometimes in well-established formulas like γούνατα καὶ φίλον ἦτορ (9 times) or γουνατ᾽ ἐλύσεν (10 times). It is worth noting that these forms cannot be replaced by those without *t*. In many instances the following word begins with a vowel and the α of γούνατα is elided; but so too would be the α of γοῦνα, so that these forms are irreplaceable within the line.

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

The dative plural shows up either as γούνασι (18 times in Homer, 10 times in the *Iliad*, as in Ε 370, with short α) or as γούνεσσι[59], which is met 3 times in the *Iliad* (Ι 488, Π451, 569). It can be noticed that the two forms occupy different places within the hexameter.

The theme without *t* doesn't seem to have lasted long after Homer. It appears mostly in poetry, in hexameters, which is probably due to Homeric influence: γοῦνα in

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[59] 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.

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Empedocles; γούνων in Homeric hymns (Dem. 263[60], Herm. 328). In the 7th century we can still find some Aeolic forms, γόνα in Sappho and Alcaeus, or γόνων in Alcaeus[61].

Sporadically, the theme without *t* continues to appear in the subsequent centuries: in the 4th century in the hexameter of Alexander Lyr., γούνων, in the 3rd century in Apollonius (3.187 and 1384 for example).

The theme in *t*, however, begins to be predominant after Homer: it appears in Hesiod: γούνατα in Op. 587, 608, then in Tyrtaeus (Ionic dialect) and Alcman (Doric, but with Ionic and Aeolic influences). Herodotus (Ionic) uses it (γουνάτων in 1.112.4 for example) and also Hippocrates. Theognis in the 6th century (1.978) is another example for Ionic. Euripides and Sophocles use only the *t*-stem.

Conclusions:

a) This word displays the *t*-stem beginning with Homer, who also makes use of the *t*-less stem.

b) The *t*-less stem becomes very rare after Homer; it is found only in hexameters to fit the meter or in Aeolian poetry (Sappho and Alcaeus). In Ionic and Attic dialect it seems to be well established in the 5th century BC. There is no compelling evidence for what happens in Doric dialects. The theme in *t* seems to have occurred first before the Ionic and Attic split. It could also be that the development of the *t*-theme was faster in Attic than in Ionic. On the other hand, the Aeolic seems not to have the theme in *t* by the time of Sappho. Nevertheless, the examples in this dialect are very few.

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[60] The *Hymn to Demeter* could be composed in the first quarter of the 7th century, the one to Hermes sometime in the middle of the same century.
[61] These forms are Aeolic because they are not contracted as in Ionic.

7) Δέος

Δέος is one of the two[62] neuter nouns in -*es*[63] which get a *t* in their paradigm.

This *t* shows up twice, in Sophocles (Fr.328) δεᾱτος and in Hecataeus (Fr.364J.)

δέατα. Both these fragments are found in Herodianus' Περὶ μονήρους λέξεως

(p.30.18). Herodianus brings these examples up in order to show that certain authors used

some of the cases of these nouns analogically to the declension of nominal neuter stems

that have -*as* in the nominative singular. 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 in their use of this word the way people spoke in the Ionic or Attic

dialects we cannot say. If this is really so, then the insertion of *t* into the paradigm of such

words could be Ionic-Attic or even older. There is a similar case with the word for "ear"

οὖς (< *ὄϝος[64], a neuter noun), ὠτός, which in Ionic has the genitive singular form

οὔατος< *ὄϝατος from which a new nominative singular, οὖας, was built[65]. The

paradigm of this word is very old, predating the split of dialects. In this way, for a word

like δέος we could have the same situation. In any case, aside the two forms from above,

this word displays the *s*-stem all the time: the genitive δέους[66] (Homeric δείους K376,

O4; Plut.Flam.7), dative δέει (D.21.124; Th.1.26; Alex.110.6), nominative/accusative

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[62] Δέος and σπέος.
[63] The type γένος.
[64] See for details, Szemerenyi, SMEA 3, po.47sqq.
[65] Simon 37.14.
[66] Δείους stands for *δεεος before consonants. Therefore, the diphthong ου is spurious; see Chantraine, *Grammaire homérique*, p.7.

plural δέη (Lys.6.20, Ael.NA8.10). We can thus see that in later times there were no forms with *t*, the noun behaving exactly like an –*es* stem.

8) Δέπας

This is a word which does not have an IE etymology[67] and, since there is no PIE r/n alternation in its structure, it does not have an archaic *t* in its stem. Δέπας is met extensively in Homer without the *t* in the stem. It is also found in Mycaenean as *di-pa*[68], the nominative singular form, and the dual *di-pa-e*[69], which shows that at that time, for that dialect, the *t*-stem had not been built yet. This fact is also an indication that the word does not come from a PIE stock where, according to Benveniste, the alternation *r/n* played such an important role in paradigms.

The dative singular δέπαϊ is found in Ψ 196, Ω 285, γ 41, ο 149, σ 121, υ 261. Another dative form, δέπα, appears in κ 316. The dative plural δεπάεσσι occurs at A 471, Γ 295, Θ 162, Ι 176, Μ 311, γ 380, 472, η 137, 183, ι 10, σ 418, φ 272, whereas the form δέπασσι occurs at O 86.

The genitive singular is not met in Homer, only the genitive plural δεπάων, at H 480. The form of the nominative and accusative plural, δέπα, appears at ο 466, Τ 62, υ 153. The genitive singular occurs for the first time only in 3rd century, in Apollonius: δέπαος at Arg. 3.10.36.

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[67] See Chantraine, *Dictionnaire*.
[68] The form with *i* displays an alternation *i/e* which occurs in Mycenaean with words of this kind, which are borrowed presumably from pre-Hellenic speakers; see, Ruijgh, *Études*, p.71.
[69] See Ruijgh, *Scripta Minora II*, p.30.

What is interesting about this word is that it almost always displays only the old stem. Despite the fact that it shows up very seldom, writers use the theme in *s* beginning with Aeschylus in the 6th century until Photius in the 9th century A.D. and even beyond that. The only time when the *t*-form appears is in the work of a grammarian, Theodosius, in the 4th century A.D.: δέπατος in Περὶ Γραμματικῆς 3.135.20. Theodosius, like Aelius Herodianus, says that Attic speakers used the form with *t*, whereas the Ionians used the one without *t*. Another occurrence could be in a inscription found in Thera (IG 12(3).450a1), the form δέπατα, but the word is given as dubious by Liddel-Scott. The inscription is dated around 500 B.C. by Jeffery[70], but the first two letters from this word are missing.

Conclusions:

Δέπας is a rare word, which seems to have been used mostly as a theme without *t*. It is not clear whether the Attic dialect used the *t*-form, but it seems that most of the time the *s*-stem was the norm in all dialects.

9) Δέρας

This word does not seem[71] to fit into Benveniste's theory. Δέρας is not used in Homer. It is a variant of δέρος, which is also not found in Homer, and, at the same time, it is considered to be a poetic and Ionic variant of δέρμα. The reason for mentioning

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[70] Jeffery, L.H., *The Local Scripts of Archaic Greece*, Oxford 1961, p.323.
[71] Despite Benveniste's claim that all the words in –*as* except κρέας and κέρας are former representatives of the *r/n* alternation. Although δέρας is an IE word (see Chantraine), it offers no evidence for having had in its structure the alternation *r/n*.

such a rare word is the fact that it displays both forms: the theme in *s*, which appears only very late, in Diod. Sic. 4.56, in the 1ˢᵗ century B.C., in the contracted genitive, δέρους[72], and the theme in *t* in the genitive, δέρατος, which appears late as well, in Aelius Herodianus, in 2ⁿᵈ century A.D. Aelius Herodianus makes the comments we mentioned above about the fact that in the Ionian dialect the nouns ending in-*s*, like δέρας, have the genitive in –αος, and not in - τος, so that the word has the form δέραος.

In sum, we can say about this rarely mentioned word that it continued to be an *s*-theme in the Ionic dialect, whereas in Attic it appears attested as a *t*-stem very late, in the 2ⁿᵈ century A.D.

10) Δόρυ

This word is parallel in many ways to γόνυ, the most important being the fact that both the theme in *t* and the one without it appear in Homer. Nevertheless, Hesiod uses both of them as well, but he uses the theme in *t* only for γόνυ.

The genitive singular δουρός<δορϜός occurs in Homer at Γ 61, 78, P 295, etc, in the Iliad, but only at τ 453 in the *Odyssey*.

The dative singular δουρί<δορϜί is found at Α 303, O 420, in the *Iliad*, or in θ 229, π 441, etc. in the *Odyssey*[73]. It appears also in Hesiod, Sc 362 and in the *Thebais*.

The nominative and accusative dual form δούρε occurs at K 76= σ 377, Γ 18, Μ

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[72] This is from *δέρεσος, the type γένος.
[73] It appears only 5 times in the *Odyssey*, without taking into consideration compounds like δουρίκλειτος.

298, Φ 145.

The dative plural has, as expected, two forms: the Aeolic[74] δούρεσσι, at Μ

303= θ 528 and δούρασι[75] at Φ 162. This latter form appears also in Eumelos' epic.

The genitive plural δούρων is met at Χ 243= ρ 384.

The nominative plural δούρα occurs 43 times in Homer and it also occurs in

Hesiod, Op. 807 and in the *Homeric Hymn to Apollo* [76](403).

These forms continue to appear over many centuries. In the 7th century, Tyrtaeus

uses δουρός and δούρασι. Alcman uses δουρί. In the 6th century, Pindar uses δουρί

(N9.26), but he also uses δούρατος (P4.38). Anacreon has δουρί and Simonides[77] both

δουρατί and δουρί. In the 5th century, Sophocles uses in Ph. 723 δούρατι and so does

Plato in Theaet. 207a 4. But Plato, in the 4th century, also uses δούρων in Resp. 389 d 3.

Herodotus has only one occurrence of δουρί (6.77.14). Theocritus in the late 4th century

and the beginning of the 3rd century, i.e., in Hellenistic times[78], still uses both forms:

δοῦρα (16.78, 22.190), δούρατος (22.185), δούρατι (24.125). And the examples with

this coexistence of both forms continue throughout the following centuries: Apollonius in

the 3rd century and Strabo in the 1st century are such examples.

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[74] The ending is Aeolic, but it is attached to the Ionic form, δουρ- .

[75] The forms δούρατος, γούνατος, δούρατα, etc. are the result of the analogy with words like ὄνομα, ὀνόματα, namely the –at- suffix was added to these t-less stems; see Chantraine, *Morphologie historique*, p.80; Sihler, *New Comparative Grammar*, p.302. It is not the case that all the neuters in –u got –at- in their paradigms: δάκρυ did not get it. Our task would then be to determine when this –at-suffix was inserted in the words in question.

[76] Probably at the end of the 6th century BC.

[77] Both writing in the Ionic dialect.

[78] He writes in both the Ionic and the Lesbian dialects. See Lesky, A., *History of Greek Literature*, p. 718.

The theme in *t* appears extensively in Homer, especially the genitive singular

δούρατος (22 times in Homer) and the nominative/accusative plural δούρατα (17

times).

It also appears in the 8ᵗʰ century outside Homer in Hesiod (δούρατα in Op. 456

and δούρατι in Sc. 462)[79] and Archilochus (δούρατα), who also uses the Atticism

δορί (2.1). These Atticisms, namely the forms without the compensatory lengthening

after the loss of F, appear also in Pindar[80] (δορί in I 8.52), tragic authors (Aeschylus

Supp.1007 or Sophocles Tr.478), and even in Hippocrates (in the compound

δορίκτητα). As we can see the forms without compensatory lengthening are not

restricted to Attic. Herodotus has δόρατα (9.62.10)[81], whereas Aristophanes has

δόρατος (Ach. 1120), Thucydides δόρατος (5.10.5.4), Xenophon δόρατα (Hell.

2.4.15.4)), etc. Aeschylus uses the form δορός in Supp.135. The form δορεί[82] can be

found in Sophocles (O. C. 620, 1314, 1386), where it is required by the meter. Δορί is

required by the meter in Aeschylus (Th. 347, 456, 958) and in Euripides (Hec. 909).

As we can see, the Attic forms are not restricted to Attic, and conversely the Ionic

forms are used by Attic authors as well.

Conclusions:

a) The word δόρυ displays two themes as early as Homer and Hesiod.

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[79] We remember that he used other forms of the same cases in the same works; see above.
[80] This form in Pindar could also be Doric or even Aeolic.
[81] Herodotus spent some years in Athens.
[82] Under the influence of the type γένος.

b) Nevertheless, Homer and Hesiod seem to have known only the forms with compensatory lengthening[83].

c) Both themes survived throughout the centuries.

d) There is no clear division between authors who use one or the other dialectal forms.

The Attic authors tend to use the forms without compensatory lengthening more, but there are exceptions. Doric authors like Pindar use sometimes the Ionic forms.

e) The fact that the *t* exists in both Ionic and Attic forms shows that it got there by or even before the time of the Ionic-Attic unity, more precisely before the F disappeared. This is because both the forms with compensatory lengthening and the ones without it have the *t* in their paradigms.

f) There is no indication of the Aeolic form as was the case with γόνυ. There is also no indication of the Doric form.

11) Ἔρως

This noun doesn't show up as a theme in *t* in Homer. In Γ 442, Ξ 294, we find the nominative form ἔρως[84] and in Ξ 315 a thematic nominative ἔρος[85]. The thematic form is used far more in the accusative singular, ἔρον (24 times in Homer, sometimes in fixed formulas at the end of the line, like ἐξ ἔρον ἕντο), than in the dative singular,

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[83] But see below, at (c).
[84] We cannot tell whether this form is an *s*-stem or a *t*-stem: it could be either from ἔρως or *ἔρωτς.
[85] The thematic form is considered to be Aeolic; see Wathelet Paul, *Les traits éoliens dans la langue de l'épopée grecque*, Roma 1970, p.255.

ἔρῳ (σ212). The formula mentioned above is also met in Hesiod and in the *Homeric Hymn to Apollo*[86] (499, 513). The *Homeric Hymn to Hermes*, on the other hand, uses ἔρωτα (449)[87].

The thematic form ἔρον continued to exist after Homer. In the 7th century it is met in Sappho and Alcaeus and in the 6th in Theognis (Eleg1.1064). Even in the 5th century we find it in Euripides (Hipp. 337).

The form ἔρου, the genitive singular, is not found until 5th century, in Hippocrates (Morb. 3.15.24), whereas the dative ἔρῳ is met in Aeschylus (Supp.1002) for the first time since Homer.

The theme in *t* appears for the first time with Sappho in the 7th century (23.1): the genitive ἔρωτος. In the 6th century we have in Theognis[88] (Eleg. 2. 1350) ἔρωτι then we have in Pindar ἔρωτες[89] (P 10.60, N 3.30), ἐρώτων (N 8.5), ἔρωτι (Frg. Encom. 127) in Aeschylus ἐρώτων (Supp. 1042), ἔρωτος (Th. 688, Ag. 743), ἔρωτας (Ch. 597). Anacreon has the god Ἔρωτα (Eleg.5.33.2). Euripides in the 5th century uses the *t*-forms 44[90] times. He can use both themes in the same play, as is the case with *Hippolytus*, where he uses the thematic form (337, as above) and the *t*-theme (775). But almost all the

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[86] Usually believed to have been composed in the 6th century.
[87] This hymn is believed to have been composed in the middle of the 7th century.
[88] Theognis usually conforms to the Ionic style; nevertheless in his language features of other dialects, like Doric, can be detected. See Palmer, p.112.
[89] This does not point necessarily to a Doric fact. It is a fact that Pindar, for example, was influenced by Ionic and even Lesbian.
[90] The thematic form Euripides uses the most is the accusative one: he has 5 instances of ἔρον in comparison to 11 cases of ἔρωτα.

forms in Euripides show his preference for the *t*-theme. Even Herodotus in the 5th century uses it (Hist.5.32.11 and 9.113.14).

The theme in *t* can also be seen in derived forms or compounds. There is a verb ἐρωτιάω (for example in Hippocrates Prog 16.11). The adjective ἐρωτικός appears in the 6th century writers like Pythagoras or Epimenides. Anacreon has a name Ἐρωτιδεύς.

Conclusions:

a) Ἔρως is not a theme in *t* in Homer; the first time it shows up as such is in Sappho, in 7th century, in Lesbian. Nevertheless, we cannot draw an *argumentum ex silentio* from this fact: perhaps the theme in *t* couldn't find a place among the Homeric formulas[91]; the fact that Homer uses only the accusative might suggest such a conclusion. Sappho, on the other hand, in Lesbian, shows that Homer could have known the theme in *t*. In this way, the *t*-theme could go back even before the Ionic-Attic.

b) 5th century evidence (Euripides) shows that the theme in *t* becomes the dominant form at this time, at least in Attic.

12) Ἱδρώς

This noun is one of those where there is a clear difference for the hexameter whether the poet uses the *t*-theme or the one without it. Homer uses only the *s*-theme:

a) the dative ἱδρῷ< *ἱδρῶσι in P 385, 745

b) the accusative ἱδρῶ< *ἱδρῶσα in Δ 27, Κ 572, 574, Λ 621, Φ 561, Χ 2.

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[91] Ἔρον cannot be a metrical substitute for Ἔρωτα.

There is, however, an instance where Homer makes use of an apparent theme in *t*: in ο 228 we find the adverb ἀνιδρωτί, with a *–ti* ending, which may be originally the reflex of a frozen locative[92]. There is also in Greek an adjective ἀνίδρωτος (used, for example, by Xenophon), which may be or may be not related to the adverbs we are talking about here[93]. Chantraine seems to lean towards the interpretation that this adverb is ancient and reflects a theme in *t*. Nevertheless, there are some other adverbs of this type which aren't originally the reflex of a theme in *t*, but the result of the reanalysis of the morphemes: ἐγρηγορτί, ἀνωιστί, ἑλληνιστί, etc. The *t* in such cases is likely then to have its origin somewhere else. We shall see later[94] what this origin might be. In any case, it seems that the *t* in ἀνιδρωτί and the *t* in the stem of ἱδρώς have nothing to do with each other.

The conclusion here is that the noun ἱδρώς is still a theme in *s* in Homer and gets its *t* only later. But let's follow how the *t* got into the paradigm of this noun. The first time it shows up is in Hesiod, in Op. 289, where we have ἱδρῶτα. After this occurrence we have a gap of two centuries and we find the *t*-theme only in the 5th century:

- in Greek tragedy: Sophocles has ἱδρῶτι in Aj. 10.

- Aristophanes has ἱδρῶτα in Ach. 695 and Eccl. 750.

- Xenophon has ἱδρῶτος in Oec. 10.8.5 or ἱδρῶτα in Mem. 2.1.20.10.

- Plato has ἱδρώτων in Phaedr. 239 c.8.

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[92] See Chapter 3 about the *–ti* adverbs.
[93] These verbal adjectives are thematic, having the suffix *–to-*; in other words they are not *t*-stems.
[94] See Chapter 4.

- Herodotus has ἰδρῶτι in Hist. 7.140.13.

- Hippocrates makes use of all the cases; nevertheless the latter has also

ἴδρωα[95] (Aph. 3.21), which is a noun in the neuter plural meaning"heat-spots".

Conclusions:

This noun most likely gets its theme in *t* in the Attic dialect and appears for the

first time in Hesiod. Nevertheless a *caveat* here: the reason Homer didn't make use of it if

it existed might be the metrics, namely the fact that a form such as ἰδρῶ in the

accusative could have been the preferred one in the metrical structure, whereas the *t*-

theme ἰδρῶτα, which scans differently, could have been "unfit" for the context in which

such a word could have been used. The fact that in Λ 621, Φ 561, X 2 Homer could have

made use of the *t*-theme if it had existed[96] but didn't might be an indication that in the

Ionic dialect the *t*-theme was not current.

13) Κέρας

Κέρας is a word that was not originally an *r/n* stem and, therefore, its *t* is treated

as a matter of insertion in later times. It doesn't have a *t* stem in Homer or in the 8th and

7th century and, as we shall see below, forms with *t*-stem and without it continues to

coexist from the 6th century, when the first *t*-stem occurs in Pindar (κεράτων in Frg.

Incert 166.4, 325.1), and Hecataeus (κέρατα in Fr.1 a, F 328 b, *apud* Eustath.II Γ6).

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[95] With variant ἰδρῶα, which is, probably, the original form.
[96] The formula is ἰδρῶ ἀποψυθείς

Then the theme in *t* seems to appear more often than the theme in *s*.

Some Attic inscriptions from the last third of the 5th century B.C. have it (dual κέρατε in IG I². 301.109 and κέρατα at 237.59) as do Sophocles (Tr. 518), Xenophon (Anab. 3.4.20.3), Plato (Polit. 265d4), etc. As we can see from the above, the vast majority[97] of the data belongs to Attic, a fact which could lead to the conclusion that the *t* was inserted first in this dialect. Unfortunately, there are few writers in other dialects, which could help us in making this case clearer. What is clear, though, is that writers continue to use both the theme in s and the one in *t* even in Attic. Herodotus, writing in the Ionic dialect, uses another form of the theme in *s*, the one based on the analogy with nouns of the type γένος: the genitive singular κέρεος (Hist. 6.111.2), the dative singular κέρεϊ (Hist. 9.10.26), the genitive plural κερέων (Hist. 2.132.3), the nominative/accusative plural κέρεα (Hist.2.38.9). As noted earlier, the use of parallel forms is extended: Thucydides uses the contracted form of the genitive singular κέρως (2.90.2.5) and so does Xenophon (Hell. 1.7.29.7). Plato has χρυσοκέρως (Alc2.149c.2), which is an adjective showing up as a theme in *t* in Euripides (Hel. 382, the accusative χρυσοκέρατα), but also as an *s*-theme in a Doric accusative from a 3rd century B.C. inscription in Cos (χρυσοκέρω, SIG 398.24). We can mention here a fact similar to one met above: the adjectives in –*to*-. We can find for this word, as we found for γήρας, both[98] ἀκέρατος (Pl.Plt.265c) and ἄκερως (Pl.Plt.265b, etc.)< *ἀκέρως. In this case, if this adjective in –*to*- represented an ancient type it would be hard to

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[97] The examples from Pindar and Hecataeus are not certain.
[98] As we can see both forms were used by Plato.

understand its formation. There is no verb related to this word and we would have a form *ἀκέραστος, as we have for the Homeric ἀγέραστος= "unrecompensed" (Il.1.119), if it had started indeed from the *s*-theme. It seems then that what we find in Plato reflects a new formation of the *t*-theme for κέρας.

The Homeric forms are the dative singular κέρα (Λ 385), the genitive plural κεράων (P 521, etc), the dative plural with two variants, κεράεσσι[99] (N 705, etc.) and κέρασι(K 294, γ 384, 426, 437)[100], the nominative/accusative plural κέρα[101] (Δ 109, τ 211, φ 395), with short α due probably to the same facts we mentioned for κρέας. As I noted above, these forms continue to exist throughout the centuries, but they are sporadic. The 7th, 6th and 5th centuries, for example, do not show either the genitive singular or the plural, but Callimachus in the 4th century[102] uses κεράων (Ap.63) and so does Nicander (Ther.322). Κεράεσσι is used by Euripides (Ion883), etc.; analogical constructions like κεράατος, κεράασι, κεράατα are used respectively in Aratus (Phaen.1.74), Apollonius (Arg. 4.978), Nicander (Ther. 291). Thucydides himself uses κέρα many times (1.50.2.1, 2.90.2.1, etc).

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[99] Also in the *Homeric Hymn to Hermes* (192), which belongs, probably, to the 7th century.
[100] Κέρασι has short *a*; whether this form comes from *κερατσι or from the *s* theme is matter of conjecture. Besides, both themes would have had the same form in the dative plural. The fact that Homer doesn't seem to have known the theme in *t* makes it very probable that the dative belongs to the *s* theme paradigm. The case is not similar to that of nouns in –μα, where the dative has no reason to derive from a non-*t* stem (as Chantraine believed) given the facts within the paradigm.
[101] See above the similar form for κρέας; also Chantraine, *Grammaire homérique*, p.209.
[102] Probably influenced by Homer. Nevertheless, Theocritus uses the form κέραος, which is not used in Homer, but which was probably the form used in Ionic epic poetry.

Conclusions:

a) Κέρας is a theme in *s* in Homer.

b) The first time it appears as a theme in *t* is in Pindar, who writes in the Doric dialect, but who is also influenced by other dialects, especially Attic and Ionic.

c) A Doric inscription shows that in this dialect the theme in *s* continued to exist in the 4th century.

d) The overwhelming number of examples of the *t*-theme comes from Attic, a fact which is supported by Herodianus' testimony.

e) The theme in *t* must have appeared sometime between the 8th and the 6th centuries in Attic.

14) Κνέφας

Chantraine gives no certain etymology for this word. The word appears in Homer in an oblique case only once, in the genitive: κνέφαος in σ 370. Another form of the genitive is met in Aristophanes, in Eccl. 291 a: κνέφους, which, as we shall see below again with the genitive, is the genitive form of an *s*-theme, κνέφος in the nominative.

The dative appears for the first time in Xenophon (Hell. 7.1.15.8 and Cyr. 4.2.15.5), κνέφᾳ. Another form of the dative, κνέφει, is found in Crinagoras (AP 7.633), in the 1st century B.C. As we can see both κνέφους and κνέφει are words that

have the nominative κνέφος[103], a word attested in Suid.[104], being analogical forms after

the γένος type.

The genitive κνέφατος appears only once, in Polybius (Hist. 8.26.10.2) in the

2nd century B.C, in Hellenistic times.

Conclusions:

Κνέφας is a rare word in Greek literature. The theme in *t* appears very late, in 2

B.C., in koine. It lacks *t* in Homer and even in later 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 he didn't presumably means that the *t*-theme in

Ionic dialect was not yet current by that time[105]. The most important observation is that

the forms without *t* seem to have been used by Attic authors until very late.

15) Κρέας

Κρέας is not an original[106] Greek *t*-stem. It is a word which displays

predominantly only the theme in *s*. The first use of a theme in *t* is in an Attic inscription

from 338 B.C.[107] Other than this, the *t*-theme is found in literature for the first time in

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[103] A *caveat* here is the case of τέρεος above, where no τέρος was attested.
[104] *Suda Lexicon*, kappa.1861.1
[105] We cannot exclude the possibility that, in this case, the epic diction preferred a certain form on the expense of the other.
[106] See the preliminaries.
[107] See Schwyzer, p.515

Phylarchus (κρέατα in FGrH#81 2A, 81, F 9.3)[108]. Thereafter the occurrences of this

theme continue to be scarce: in the 1st century A.D. Cyranides uses κρέατος (1.3.34). In

the 2nd A.D. in Athenaeus (e.g., κρέατος in Deipn. 5.20.36)[109], in Origenes (12.31.65)

and in Aelius Herodianus. Then we find κρεάτων in the 1st century A.D. in

Testamentum Abrahae (6.10) and the examples seem to increase only a little during the

following centuries. Chantraine[110] believes, however, that the insertion of *t* may be old, in

fact as old as Homer, since there are several formulas in the *Odyssey* where κρέα τ' can

be read κρέατ'. In fact, the formulas he talks about are only three in number: ἥμεθα

δαινύμενοι κρέα τ' ἄσπετα καὶ μέθυ ἡδύ (ι 162, 557, κ 184, 468, 477, μ 30);

δαῖτ' ἐντυνόμενοι κρέα τ'ὤπτων ἄλλα τ' ἔπειρον (γ 33); ὣς φάθ', ὁ δ'

ἐνδυκέως κρέα τ' ἤσθιε πῖνέ τε οἶνον (ξ 109). At least one of these, the last one

above, shows a chiastic[111] construction, which makes sense only if κρέα is read as a

theme in *s*.

As we can see from the above, the forms in *t* are very rare, and it seems that

Chantraine's claim that the *t* might be very old is not well supported by the evidence. On

the contrary, the "old" forms are very well attested, beginning, of course, with Homer and

continuing throughout the centuries. Homer has κρειῶν[112], which is considered to be a

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[108] 3rd century B.C.

[109] He also uses the *s* stem, e.g. κρέα (Deipn. 4.35.16).

[110] *Grammaire homérique*, I 210.

[111] Κρέα is before ἤσθιε 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).

[112] For example at Λ 551. It is believed that it was made after Attic κρεῶν, which is met in Homer at ο 98, but, as Chantraine states (see above), it is not clear at all how the form was in fact formed. Nevertheless, in

substitute for κρεάων. This latter form, on the other hand, appears first in the Homeric hymn to Hermes (130). Homer also uses the dative κρέασιν (Θ 162) and a form κρέα with short α[113] for the nominative/accusative plural, fact which is explained by Chantraine in two ways: either accepting Schwyzer's hypothesis that it is derived from a root without *s- *κρεϝα-* or that it was formed by analogy with the neuters ending in short α in the nominative/accusative plural, such as in the word δῶρα, where the a is short.

The genitive singular κρέως[114] occurs in Sophocles (Fr. 728). In the 7th century Semonides uses κρέα and so do Theognis and Hecataios in the 6th century. In the 5th century Herodotus has κρέα, and so does Aristophanes. Xenophanes and Plato have κρέασιν; Aristotle has both κρέασιν and κρέα.

Other forms are κρίως on a Cretan inscription (GDI 5128 from 6-5th century B.C.) and Doric κρῆς in Sophron Comicus (22) and even in Aristophanes (Ach.795). The analogical datives κρεάεσσι and κρέεσσι occur in Epic.in Arch.Pap.7.4 and in Orac.apud Hdt.1.47, respectively.

A word should be said here about the compound words with κρέας: there are none containing the *t*-stem and serving as the first term of the compound, e.g.,

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the *Dictionnaire Étymologique* Chantraine seems to be favorable to the hypothesis that κρεῖων< *κρεέων, which, in turn, should be analogical to the genitive of words like γένος.
[113] Normally, it should have been with long a from *κρεαα<* κρεασα
[114] Attic contraction, i.e. α followed by ο get contracted in Attic to ω.

κρεανόμος, κρεανομία, κρεαδοσία, κρεοβόρος, κρεουργός, etc. Modern Greek uses κρέας as a *t*-stem[115] and has κρεατινός[116].

Conclusions:

a) Κρέας persists as a theme in *s* long after Homer.

b) There is no clear evidence when the *t* got into the paradigm. Chantraine's assertion that it might be Homeric, i.e., Ionic, is not very well supported by the facts. The first time the *t* is met is in the 4th century B.C. in an Attic inscription and in the 3rd century B.C. in Phylarchus. This could hint at an Attic origin. As we have already seen, Aelius Herodianus supports the idea that the *t* insertion for this word is Attic.

16) Σέλας

There is only one attestation with *t*, and this comes very late: σέλατος in Conon[117] 49.2. All the other forms belong to the *s*-stem declension: dative singular σέλαϊ (Il.17.739), contracted form σέλα (Od.21.246); genitive singular σέλαος (Plot.6.7.33); nominative/accusative plural σέλα (Arist.Mu.395ᵃ31, Plu.Caes.63, AP.9.289); genitive plural σελάων (Arist.Mu.395ᵃ31 codd).

Conclusions:

Σέλας is in almost all situations and dialects (Attic and Ionic at least, and, perhaps, koine) treated as an *s*-stem. The *t*-stem appears only once and very late, in the 1st

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[115] The genitive is κρέατος.
[116] See Chantraine, *Dictionnaire Étymologique.*
[117] Conon Historicus lived in 1st century AD.

century A.D.

17) Σπέος

The case of σπέος is similar to that of δέος. Xenophanes, in the 6th-5th centuries B.C., uses the form σπεάτεσσι (in hexameter). In all other situations there is no *t*-stem[118]: genitive singular σπείους (Od.5.68, al.), dative singular σπῆϊ (Il.18.402, Od.2.20, al.) or σπέϊ (Opp.C.4.246), dative plural σπήεσσι or σπηέσσι (Od.1.15, al., 9.400, al.), genitive plural σπείων (h.Ven.263).

Conclusions:

The word seems to have an allomorph in *t* and with Aeolic ending early, in the 6th century (in hexameter). An adaptation of the word to the requirement of the meter is not excluded.

18) Τέρας

This is word which is included by Benveniste among those with *t* in their stems as archaisms. Nevertheless it doesn't have a *t*-form in Homer; that is to say, it displays only the s-theme. The forms which show up in Homer are the following:

- τεράων, the genitive plural, at Μ 229.

- τεράεσσι, the dative plural, at Δ 398, 408, Ζ 183, Μ 256.

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[118] Many of the forms were created by analogy; see Chantraine, ibidem.

- τέραα[119], the accusative plural, at μ 394.

These forms continued to exist through the centuries. Although they don't show up in the 7th and 6th centuries, they appear in Herodotus: τέρεα at 8.37.8 and τέρεος at 8.37.9[120]. Nevertheless, Aeschylus uses (Ag. 125) a denominative verb τεράζω, which, whatever its analogical basis may be, is not derived from the *t*-theme[121]. Later on the theme in *s* is predominant:

a) in the 4th century we find τεράων in Callimachus (O 1569).

b) in the 3rd century τεράων in Apollonius, Arg. 4.1364 and τέραα in Aristophanes Gramm.

c) In the 4th century τέραος in Aratus, Phaen. 1.402, Eudoxus, etc. On the other hand, τερέων is found in Alcaeus (Lesbian), in the 7th century, in 1.424.1.

The theme in *t* appears for the first[122] time in the 6th century in Aeschylus, in the compound τερατολογεῖν (Frg 44 A 603); Hecataeus uses the same word, and Pythagoras has the compounds τερατοποιίας (6 7.6) or τερατοσκόπος (6 15.2).

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[119] As we can see, the meter is not affected by the use of the *t* forms: the poet could have easily used any if he had had them at hand; the *t* would not have affected the scansion of these words.
[120] These (Ionic and Aeolic) forms with *e* instead of *a* are explained in two ways: either by analogy with type γένος or phonetically by seeing in them the tendency to avoid the contraction of the vowels αο. See Chantraine or Schwyzer, 1, 242-43. The analysis of this phenomenon goes beyond the purpose of my research. I incline to see them as a result of analogy with the type γένος.
[121] The presents ending in –ζω originate in verb roots ending in *g, *gʷ or *d: *ἁρπαγ- ιω>ἁρπάζω. *Ελπιδ- ιω>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 *τερατ- ιω>*τερασσω. This shows that the form τεράζω is analogical and similar to other such forms, e.g.*νόμος*/νομίζω, τεῖχος/τειχίζω, ἀγορά/ἀγοράζω etc. What we are dealing with here is probably an interpretation of τέρας as having the *s* of the nominative.
[122] Nevertheless we cannot rely on them because they show up in Diogenes La ertios, a writer in *koine*.

The 5th century brings a plethora of occurrences of the theme in *t*. Even Herodotus uses it alongside the other theme mentioned above: τέρατα (Hist. 2.82.5), τέρατος (Hist. 2.82.6). Aristophanes has the derivatives from the *t*-theme τερατείας (Nub. 318), τερατῶδες (Nub. 364); Xenophon has τέρατα (Mem. 1.4.15.5), Plato uses τέρατος Crat. 394 d5), τέρατα (Phileb. 14 e 3, Hp. Ma. 300 e 7), etc.[123] *The Homeric Hymn to Pan*[124] (36) has τερατωπόν.

Conclusions:

a) One can see a strong preference for the Attic writers to use the theme in *t*; this is obvious beginning with the 5th century BC.

b) The theme without *t* appears in Homer everywhere and it is not a matter of fitting the form into the meter.

c) The authors who make use of the theme without *t* write in the Ionic or Aeolic dialects (Alcaeus, Herodotus) are influenced by Homer (Apollonius, Callimachus) or were born in Asia Minor (Aratus).

d)   The first occurrence of the theme in *t* is late, in the 5th century, and only in Attic. This *t*-stem could be an archaism in the sense of Benveniste.

19) Φῶς

The Homeric attestations of this word in the nominative/accusative singular are

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[123] Isocrates, Democritus, Empedocles, Hippocrates are some of the authors that make use of the theme in *t*; Philoxenus Lyr. (1 11.1) uses the dative τέρατι.
[124] Considered to be composed in the 5th century. See A, Athanassakis, *The Homeric Hymns*, Baltimore, 1976.

φάος and φόως. The latter form of the word was explained by Wackernagel[125] as being a creation of poetic diction, after the Ionic-Attic contraction. This phenomenon bears the name of διέκτασις and consists of repeating a vowel for metrical accommodation. Clear examples are ὁράασθε, μνώοντο, ἡβώωντα, which cannot be explained etymologically in any way. A "normal" form like ὁράεσθε would have existed in the oldest times of formulas, but, with time, in day-to-day language, would have contracted into ὁρᾶσθε. The forms that resulted artificially would then be due to the effort to maintain the two or three *morae* in the meter. In our case, φῶς becomes φόως. We can notice that this form is used only in front of consonants, where the vowel should be long by position and where φάος would have worked as well. In this way, Wackernagel's assumption gains even more credibility.

Φόως appears after Homer in the Homeric hymns (Ap. 119[126], Herm.12, 141, 184) and in Hesiod (Th.669). A first conclusion which can be drawn is that the contracted form already existed at least in the 8th century, but, for metrical reasons, Homer didn't use it. The data below support this conclusion.

Φάος continued to exist throughout the centuries and in many dialects: Sappho, Archilochus, Stesichorus, Alcaeus in the 7th century; Theognis, Pindar in the 6th century; the tragic poets, Parmenides, and Aristophanes in the 5th century. This shows that the uncontracted form continued to exist alongside the contracted form. One cannot exclude,

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[125] *Bezzenbergers Beitr.*IV259sqq; *Sprachliche Untersuchungen zu Homer*, 66sqq. See also Chantraine, *Grammaire Homérique*, 75sqq. My hypothesis is based, of course, on the assumption that Wackernagel's assumption was correct.
[126] It belongs to the 6th century, but the diction may have been older.

I believe, the possibility that one reason for this was the influence of Homeric poetry, although it is very likely that the form itself continued to be used by the speakers. Φῶς, the contracted form, appears as such in both Ionic and Attic dialects: Alcman, Anaximander, Theognis, Anaximenes, Anaxagoras, tragic poets, Herodotus, Aristophanes, etc.

The forms met in Homer are: the accusative plural φάεα (π 15, ρ 39, τ 417) and the dative singular φάει (Il 17.47, Od. 21.429).The genitive singular φάους shows up in Xenophon (Cyr.4.2.9, 26 and Oec.9.3), and in Aristotle (de An. 429.3); a non-contracted form of the genitive, φάεος, appears in Plato (Crat.407 c4) and Parmenides (Frg. 9.6).

Dative plural Φαέσσι, with an Aeolic ending, occurs first in Hesiod (Fr. 142.4) and thereafter only in Callimachus (Dian.211). The form φάεσι appears also in Callimachus (Dian.71).

The genitive plural φαέων shows up only in Aratus (Phaen. 1.90), i.e. in 4 A.D., which shows that the "original" forms continued to exist long after the introduction of *t* in the paradigm. Another "strange" form is φῶν, which is an accusative met in Cyme, in a hymn to Isis (BCH51.380). The *n* in this form is an addition to mark it overtly as accusative.

The first time we meet *t* in the paradigm is in a denominative verb: φωτίζεσθαι in Anaximander[127] (apud Diog[128].II105) and Thales. In the 6th century we meet this verb

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[127] 6th century. Thales lived in the same century.
[128] This dating makes sense only if knew **for sure** that the authors are quoted *verbatim*. Unfortunately we cannot say this.

in Heraclitus. In the 5th century there is a derived adjective φωτεινός in Xenophon (Mem. 4.3.4.2).

The word itself as a *t*-stem, e.g., the genitive φωτός, appears for the first time in Anaxagoras (apud Diog.II 6.15). The same genitive appears in Plato (Rep. 518 a), whereas the dative φωτί is met for the first time in Aeschylus (Th.435, 470, 671; Ag.1262). Nevertheless, another form, without *t*, φῷ is used by Euripides (Fr. 534.1), which in fact might suggest that there was a center of resistance for the old forms in Attic dialect. In this case, what will later become the Ionic dialect might be the center of diffusion for the *t* insertion.

The genitive plural φώτων in a inscription of Epidauros (IG IV, 1².110.43 from IV B.C. Φωσί, the dative plural, is used by Ps.-Democr. (Alch. p. 46B)[129].

Conclusions:

a)   Φῶς does not appear in Homer; the Homeric text uses instead φάος and φόως; nevertheless the fact that φόως exists presupposes a form φῶς so that it is likely that the contraction is Ionic-Attic[130]. The *t* insertion might be Ionic-Attic as well, but we cannot be sure about it. On the other hand, φῶς appears basically in both Ionic and Attic dialects with 6th century. Whether the center of diffusion was within the later Ionic dialect is a matter of conjecture.

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[129] 5th century.
[130] Attic contracts more than Ionic and Homer is relevant for this. Nevertheless, a sequence *a o*, where *a* is under accent is very rare and it gets generally, to my knowledge, contracted. A good example of this is μνάομαι, which is contracted in Ionic, for example in Homer and Herodotus.

b)   The *t*-stem appears as early as the 6th century (Anaximander, Thales) in Ionic. The Attic dialect uses it for the first time with Aeschylus.

c)   The evidence for the Aeolic or Doric dialects is very scarce. Nevertheless, they seem to have avoided the contracted forms or the themes in *t*.

d)   From the data above we can infer that the *t*-insertion, which appeared after the Ionic-Attic contraction, occurred in Attic or even before, in Ionic-Attic. Chantraine believes[131] that the *t* is an Attic innovation, but an innovation in the Ionic-Attic dialect cannot be excluded.

20) Χάρις

Χάρις is met in Homer in the nominative and accusative singular and in the dative plural as referring to "grace, favor done or returned, etc." The accusative in Homer is χάριν and the dative plural form is χάρισι, both being derivatives from a Greek root χαρ-, from which we have also the verb χαίρω<*χαρ-ιω. There is also a theme in *t* of this noun: χαριτ-, which already exists in Homer, but it means the Graces: E 338 (Χάριτες), Ξ 267 (Χαρίτων), 275 (Χαρίτων), Ρ 51 (Χαριτέσσιν), ζ 18 (Χαρίτων), θ 364 (Χάριτες), s 194 (Χαρίτων). The form occurs 4 times in Homeric Hymns: Aphr.61 (Χάριτες) and 95 (Χαρίτων), Ap.194 (Χάριτες), Art.15 (Χαρίτων). Hesiod uses the noun 15 times in all the cases of the plural, including the

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[131] *Dictionnaire étymologique de la langue grecque.*

accusative plural Χάριτας (Th. 907). Cypria has two occurrences, both Χάριτες (4.1

and 5.4). Hesiod is the first occurrence of this theme in *t* used as a common noun.

The 7th century evidence shows the theme in *t* referring only to the Graces. The

authors that use it are Sappho, Alcman, Alcaeus and Stesichorus.

In the 6th century Theognis uses the proper name as a *t*-stem and so does Ibycus

(χαριτώσιος, fr.341 Page). This is the first time when the common noun appears as a

well established *t*-stem: in Pindar P 3.72 (χάριτας), P 4.275 (χάριτες), O 7.93

(χαριτέσσιν), I 1.6 (χάριτων), etc.; inAeschylus Ag. 787 (χάριτος), Ch 320

(χάριτες); in Anacreon (iamb7.142.1, χαριτόεις[132]); in Simonides 6.212.4 (χαρίτων).

Moreover, we have information in Herodianus that Anacreon was the first to use the

word χαρίεις in its full form χαριτόεις[133].

From the 5th century onward the examples abound. As we can see from the above

Homer uses only the singular as a common noun, whereas he uses the plural when he

refers to the goddesses. Also Homer uses χάρις only in the nominative and in the

accusative, χάριν, and, from this perspective it would be interesting to see the way the

competition between χάριν and χάριτα functions. On the other hand, there are

situations in Homer when the poet could have used χάριτα instead of χάριν, because

the meter would have allowed elision, as it is the case in E 574 (χάριν ἄνδρεσσιν).

The fact that he didn't use it seems to show that the form χάριν was, if not the only one,

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[132] A derivative from the *t*-stem.
[133] Anacreon fr.487 Loeb.

at least the prevailing one in the Ionic dialect. The same conclusion could be reached

about other dialects, since Hesiod, Pindar or Aeschylos could have used in their poetry

the elided form χάριτ˚ instead of χάριν[134] . The 7th and 6th centuries know only χάριν,

and sometimes the numbers are very relevant[135]: 39 times in Theognis, 29 in Pindar, 26 in

Aeschylus, etc.

     The first author to use both forms is Euripides, in the 5th century. We can find

one example of χάριτα in *Helen* 1378 and *Electra* 61, whereas χάριν appears in the

rest (TLG lists 163 examples of χάριν in Euripides). Herodotus uses it in his *Histories*

(in 6.41.13 and 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

evidence seems to indicate the fact that the accusative form χάριτα is a later form:

χάριν is used instead almost in all the instances.

     One should mention here that χάριν is already used as a preposition in Homer,

for example in O 744 (χάριν Ἕκτορος). Hesiod also has it in Op.709 (ψεύδεσθαι

γλώσσης χάριν, "lying for the sake of talking") [136].

     One of the most important issues regarding this word, and a puzzling one as well,

is the fact that the stem seems to have gotten a *t* long before Homer, but only when the

word meant "Graces", i.e., the goddesses. It is difficult to see why this happens; the

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[134] Some examples: Hesiod, Op.65: χάριν ἀμφιχέαι, Pindar, O2.10: χάριν ἄγων, Aeschylos, Ag.1545: χάριν ἀντ˚ἔργων, etc. We can see that the two forms are metrically interchangeable.
[135] Given the fact that we know that the *t* stems are later forms, the preference for the *t*-less form shows the fact that the *t*-stem had not spread sufficiently by the time we discuss here.
[136] The accusative can be used adverbially, so the use of this word in such a way does not necessarily mean that it became a preposition.

etymology which has been proposed[137] and which links the Greek word to an Armenian *jir*< *ghēr-i- is not very helpful, since it only shows that the original form of the word was not a dental stem. On the other hand, χάριν as a common noun must be clearly related to the other accusative forms of the themes in *i*, like πόλις for example, whose accusative form is πόλιν, with the ν as in other vowel-stem declensions[138]. How, then, did it get the *t* in its paradigm?

Chantraine[139] subscribes to the opinion that the noun is an ancient theme in *i*. On the other hand, Benveniste[140] makes the hypothesis that, in a word like Θέμις, similar in its morphological form to χάρις, one can detect an old neuter in *i*, Θεμι-, which would have passed to the neuters in *s*. This development would be shown by old phrases like Θέμις εστί="it is right, just" (equivalent to Lat. *fas est*) or by old compounds like θεμίσκοπος, θεμίξενος[141], etc., where we would still see the old theme in *i*. Benveniste does not explain clearly how this word eventually became feminine. In his opinion[142] this happened when its declension got mixed with that one of the feminine nouns in –ιδ- and it became 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 stem in *t*, θεμιτ-, this would be the result of the analogy after what is now a scarce remainder of former *i*-stems: a word like ἄλφι, ἄλφιτος "flour". Consequently,

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[137] For discussion see Chantraine, *Dictionnaire étymologique*.
[138] The first declension for example.
[139] He follows Solmsen, *Beiträge zur griechieschen Wortforschung I*, Strassburg 1909, 159-60, on this.
[140] *Origines de la formation de noms en indoeuropéen*, Paris 1935, p.34.
[141] "Seeing to justice" and "just to strangers" respectively.
[142] Ibidem.

we would have the following steps here: θέμι has its genitive θέμιτος, then a new form

is produced, θέμις, which would still have the genitive θέμιτος, but which would also

create a new genitive, based on the older genitive form and the new nominative,

θέμιστος (Od. 2.68). At this point the word would have also become feminine.

Benveniste's argument, although it refers only to θέμις, is a convincing one. The

paradigm with *t* then could have its origins in such a neuter noun. What about χάρις,

then? On the other hand, it is not clear enough even in Benveniste's view what was

responsible for the change in gender in the case of θέμις. This goes also for χάρις if

the assumption that it derives from a neuter *χαρι- is correct[143]. I would suggest here

another hypothesis: in Greek mythology there are several goddesses whose name is a

noun ending in –ις. This is the case with Ἄρτεμις, Μῆτις, Ἶρις, Θέτις, Ἔρις, Θέμις

and Χάρις. With the exception of Μῆτις these names have doubtful etymology[144].

Μῆτις itself is regarded as a *nomen actionis*[145] originally from the PIE root indicating

the action of measuring: *meH₂*. The declension of these nouns varies very much, that is to

say they display several themes. Ἄρτεμις has already been analyzed. Ἶρις has only the

theme in –δ- (ἴριδος in Thphr.CP6.11.13), but also the accusative in –ιν (Plu.2.664e)

besides Ἶριδα (Nic.Al.406). Θέτις shows a genitive Θέτιδος (Il.4.512), but also a

Doric one Θέτιος (Pi.I.8(7).30); it also has the accusative Θέτιν (Il.13.350, etc).

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[143] As is the case with θέμις and its compounds there are compounds for χάρις, in which the first part of
the compound is χάρι- , e.g. χαριδώτης= "joy-giver". See also Chantraine for this assumption.
[144] See Chantraine, *Dictionnaire*.
[145] Ibidem.

Μῆτις[146] has a genitive Μήτιδος (A.Supp.61), but also Μήτιος (Pi.N.3.9) and an accusative Μῆτιν (Il.2.407). Ἔρις is a stem in –δ-, although Liddell-Scott gives its declension only for the common name ("strife"), not for the goddess.

We can see from the above a fairly complicated picture in respect to the declension of these nouns. Two things, though, are pretty clear: the first is that the themes in δ are predominant; the second is that the variety in forms is due to multiple analogies. Thus, the accusative in -ιν and the genitive in -ιος would be analogical to the type πόλις. The theme in δ is common for feminine nouns, so it makes sense for it to be used for proper feminine nouns.

We are left with the stems in τ. The Mycenaean forms for Ἄρτεμις and the Doric month show that the *t* is old. We can always say, of course, that this was a *t*-stem originally like Chantraine. But I think there is also the possibility that this noun got its *t* from a noun like Θέμις, where the *t* could be a trace of a neuter noun. We could have then the following process: θέμις and χάρις derive from common neuter nouns, which built their stem with *t* after the model ἄλφι, ἄλφιτος. Then we have the respective goddesses, Θέμις and Χάρις, with the *s*-ending 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. The stem in *t*, however, continued to exist for the proper nouns although the neuter common nouns had disappeared completely from the language. From here it was imported to some the names of the goddesses which originally were *d*-stems.

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[146] The –*ti* instead of the assibilation is still unexplained; see Chantraine, ibidem.

In this way, the picture could be completely different from what Chantraine believed, namely that the *t*, although very old, it was not originally present in the stem of a word like Ἄρτεμις. As for Χάρις it seems probable that the *t* has a very long history in this word.

We can sum up now the situation in the case of χάρις as the following:

a) The theme in *t* appears to be established in Homer, but only referring to the Graces; Homer doesn't use the theme in *t* for the common noun meaning "grace, favor". Nevertheless, we cannot say anything about the common noun, since we have no occurrences of it in oblique cases where the stem is visible.

b) Homer and other poets-both in Ionic and in Attic- could have easily used χάριτα instead of χάριν before vowels (when the elision could have taken place); the fact that he didn't seems to indicate that the theme in *t* had not spread fully in these dialects.

c) The first occurrence of a *t*-theme is in Hesiod, and that is in the dative. Hesiod uses mainly the Ionic dialect in his hexameters, but he also uses forms from other dialects, including Attic. In this respect, the theme in *t* he uses might be the result of the influence of other dialects, but we cannot tell.

d) In the 5th century, Euripides, writing in the Attic dialect, and Herodotus, writing chiefly in Ionic[147], provide the first evidence of the use of χάριτα. The rest of the accusative forms indicate, both in Euripides and in other authors of this century, a clear preference for χάριν.

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[147] Herodotus, however, makes use of Atticisms.

e) The theme in *t* seems to be well established beginning with the 6th century, especially in non-Ionic dialects (Pindar, Aeschylus). Nevertheless, its use for the proper name seems to indicate that it occurred first in the Ionic-Attic dialect, or even earlier. Nevertheless, the accusative singular of the theme in *t* seems to have occurred first and become predominant in the Attic dialect.

21) Χρώς

This word occurs in most cases in Homer as a theme in *s*. Nevertheless, the theme in *t* exists in Homer and shows up three times, as we can see from the list below:

χροός- appears 20[148] times in Homer

χροΐ- appears 42 times in Homer

χρόα[149]- appears 32 times in Homer

χρωτός- K575

χρῶτα- σ172, 179

These forms could be later than the 8th century, since they appear in the *Doloneia* (the 10th book of the *Iliad*) and the *Odyssey,* which may have been composed later, perhaps at the beginning of the 7th century[150]. Nevertheless, Hesiod uses the form χρῶτα in Op.556, so it wouldn't be risky to assume that they already had a place within formulaic epic diction by the 8th century.

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[148] Numbers taken from the TLG.
[149] All these forms result from the loss of *s:* *χροσα>χρόα, etc.
[150] See, for example, Janko, R, *Homer*, *Hesiod and the Hymns*, Cambridge 1982, passim.

The different forms represent different options for fitting into the hexameter. For example, the occurrences of the theme in *t* in the *Odyssey* are at the beginning of the line, a position in which the hexameter began obligatorily with a long syllable. Χρόα wouldn't[151] have worked in this position, so the poet chose another form he had at hand. These forms are usually considered to be Atticisms[152].

Both the theme in *t* and the one without it coexist in the centuries after Homer. We find χροός in 6th-century authors like Theognis (Eleg 2.1341) in the compound ἀπαλόχροος, then in the 5th century, in Euripides (as, for example, in Hipp. 1359). The form continued to exist even later, after the 4th century (in Theocritus, Aristotle, Apollonius, Philo Judaeus, etc).

Χροΐ is present in the 6th century in Pindar (N 8.28) and in Aeschylus (Supp 790). In the 5th century we find it in Euripides (Cyclops 399), in Sophocles (Tr 605) and in Herodotus (Hist. 4.175.5) and the list continues with 4th century authors like Theocritus, Aristotle, etc. Another form of the dative, χρῷ[153], occurs only in the phrase ἐν χρῷ= "close to the skin" : Xenophon, HG 1.7.8, Sophocles, Aj.786, Thucydides, 2.84, Pherecrates 30[154] and in later authors.

Χρόα is met in Sappho (Supp. 10.6) and then in Archilochus and Tyrtaeus. In the 6th century we find it in Theognis (1.217) and Meropis(5.1).

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[151] Od. 18.172: χρῶτ' ἀπονιψαμένη, at the beginning of the hexameter; χρόα would have had the first syllable short and couldn't have worked as the first syllable of the line.
[152] See Chantraine, *Dictionnaire étymologique de la langue grecque*
[153] This form could be the thematic one, i.e. the *t*-less stem: see Chantraine, *Grammaire*, p.211.
[154] These authors belong to the 5th century BC.

The theme in *t*, on the other hand, is found beginning with 6th century authors. Χρωτί is met in Pindar (P 1.55); χρῶτα in Pindar (I3.41) and in Aeschylus (Pers. 317).

The 5th century brings more occurrences of the *t*-stem: it is found 18 times in Euripides, 2 times in Sophocles, 2 times in Aristophanes, etc.

Overall we can see that, especially with the 5th century, the theme in *t* becomes predominant, though the other forms continue to appear, either because of the Homeric influence or they were just competing forms.

Conclusions:

a) Χρώς appears in Homer in almost all cases as a theme in *s*. Nevertheless,

b) There are three instances in which *t*-stem shows up, two in the *Odyssey* in the accusative and one in the Iliad in the genitive[155].

c) The theme in *t* appears also in Hesiod.

Sometimes the same author uses both forms, as it is the case with Pindar or Euripides and Sophocles; the tragedy authors seem to prefer the theme in *t*. Herodotus doesn't use[156] the theme in *t*, which seems to indicate that it was not very much in use in the Ionic[157] dialect. All these facts seem to point to the Attic dialect as the more likely point of diffusion for the theme in *t*, but its appearance during the Ionic-Attic unity is not excluded. The occurrences in Homer and Hesiod can lead to such assumption. Nevertheless it could be that the center of spreading was what will later become the Attic dialect.

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[155] Il.10.575; Od. 18.172,179.
[156] There is only one occurrence of this noun in Hist. 4.175.5, but without *t*: χροΐ.
[157] This is supported by the greater number of occurrences in tragic authors.

General conclusions:

a) The words analyzed above split into two categories according to the time when the *t* entered their paradigms. One of them, represented by some of the neuters which end in the nominative singular in –*as*, has the *t* inserted in prehistoric times, probably before the splitting of Greek dialects. We called this *t* an "archaic" one; therefore, according to Benveniste's theory, its presence in some dialects has been seen as an archaism within Greek (though innovation from the perspective of PIE). This archaism is based on the old PIE alternation *r/n*, which is at the origin of *t* as we have it in Greek. Exceptions to this category are κρέας and κέρας, for which the PIE perspective shows that they were neither words in which the *r/n* alternation was present, nor *t*-stems originally. Their analysis therefore starts from the premise that they acquired their *t* later or, as the data shows, after the dialectal split of Greek. There are other words, however, for which we cannot tell whether they were originally stems with *r/n* alternation. Some of them are borrowings, like δέπας. For others there is simply no IE evidence that they were stems with *r/n* alternation. This is the case with δέρας. A word like κνέφας, on the other hand, shows no clear etymology and, consequently, we cannot tell whether it had originally a *t* in it.

The other category includes all the words that acquired their *t* after the dialectal split of Greek.

From the analysis we can infer that the theme in *t* did not appear in all words and in all dialects at once. Nevertheless, for some words ending in the nominative in –*as* like

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κέρας, κρέας, δέρας κνέφας, δέπας the *t*-stem showed up first in Attic. This fact goes along, as said above, with the fact that the *t* in these words might be an innovation within historical Greek, not an archaism, i.e., a carry-over from a Pre-Greek innovative intrusive *t*. An important observation here is that sometimes this insertion of *t* is very late as is the case with κέρας and κρέας. On the other hand, the extensive use of the *s*-stem instead of the *t*-stem may underline once more the fact that these stems were originally *s*-stems.

The second category, with words ending in the nominative in *-as* and having their *t* as an archaism, includes the following words: τέρας, γέρας, and γῆρας. Nevertheless, even here one cannot be sure, despite Benveniste, that γέρας and γῆρας were originally, in Greek, *t*-stems. Benveniste's argument that γέρας shows the old *r/n* alternation in other words like γέρων, γεραρός, γεραίρω is not indisputable. Γέρων, for example, might be an old participle[158], whereas the formation of γεραίρω< *γεραριω might be analogical. In fact, a word like πεῖραρ, πείρατος, which does display a *r/n* alternation and which should have behaved like γέρας, forms a verb περαίνω< *pern̥yō[159], not *περαίρω. On the other hand, the adjective γεραρός might be not the result of the same alternation, but of the adding of the suffix *–ro-*[160] to a stem *gerH$_2$ -. We might be left then only with τέρας as a word which follows Benveniste's

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[158] Cf. Skt. *jarant-;* see Beekes, *Comparative Indo-European Linguistics*, p.109.
[159] For the phonological development, see Sihler, op.cit. p. 517.
[160] See Chantraine, *La formation*…, p.226sqq.

theory about their origin in the old PIE *r/n* alternation. The name Τειρεσίας< *τερετ-

might also be a proof for an original *t*-stem of this word. Would it be possible then to

accept that the analogy in building other *t*-stems worked from a single word? Although it

is very hard to accept, it might, however, be possible since we are talking here about a

spread to only 5-6 words. Another important point would be the fact that τέρας is not a

marginal word in Greek, but one loaded with religious connotations. In any case, our data

supports the fact that only τέρας might have had the original *t* in it.

One of the most important results of our research is that these words show only in

Attic a *t*-stem, whereas Ionic got rid of the *t*-stem and replaced it with an *s*-stem. The

problem here is to determine in the first place how and where (in what dialect) there were

two allomorphs, the *s*-stem and the *t*-stem, for the same word. The fact that we have a

form like the genitive singular τέραος in Ionic is explained by the fact that it is the result

of an older *τέρασος, which lost its intervocalic *s*. Nevertheless, the intervocalic *s* was

lost before the split of Ionic and Attic. This means that *τέρασος was a form found at

least as early as Ionic-Attic, quite likely in Pre-Greek times. What happened then in Attic

with this form? What happened in Ionic? The conclusion of our research is that the *t*-less

forms and the *t*-ful ones coexisted in Ionic-Attic. This is clearly shown by words like

γέρας and γῆρας, for which the *t*-less forms, namely the *s*-stems, were extensively[161]

used in Attic even in post-Classical period. A word like τέρας shows that it suppressed

its *s*-allomorphs in Attic earlier than the other words. What happened then in Attic is that

the declension of the nouns that have an "archaic" *t* in their stems exerted an analogical

influence on the words that did not have the *t* originally. 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 was achieved is not entirely transparent, but it is clear that it was the analogy to the "old" *s*-stems that produced the change. Herodianus' assertion that the Ionic forms lost their *t* may have some truth in it, in the sense that he knew somehow that the "older" Ionic used the *t*-forms as well. The "dropping" of *t* then would be precisely the suppression of the *t* forms in Ionic. Whether this was a socio-linguistic way for the Ionic population to differentiate themselves from their Attic brothers is hard to say. Of crucial importance is the fact that Ionic-Attic used parallel allomorphs for the same words.

b) As for the words in –ως, γέλως and ἱδρώς seem to have gotten the *t* in their stem in Attic; χρώς and ἔρως, on the other hand, probably innovated the *t*-forms in Ionic-Attic (ἔρως even earlier).

c) Γόνυ and δόρυ innovated the *t*-forms in Ionic-Attic or even earlier.

d) Χάρις and φάος seem also to have gotten the *t* during the Ionic-Attic. An earlier *t*-intrusion is also not excluded.

e) We cannot say from the data whether the spreading started off with a single case; first occurrences of *t*-themes can be either accusative (χρῶτα in Homer, ἱδρῶτα in Hesiod), dative (γήρατι in Isocrates), or genitive (γέλωτος in Aeschylus). This is not surprising given the fact that we deal here with scattered evidence from literary

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[161] The contracted form γέρως used in Attic is a proof of this.

sources and not with data from real speech.

f) Benveniste's theory about the origins of this "intrusive" *t* in the heteroclitic

declension can be neither confirmed nor denied entirely.

CHAPTER 3

THE –*ti* ADVERBS IN GREEK

We will have to look again now at one of the problems mentioned earlier in this work, namely the issue of the –*ti* adverbs in Greek and the implications they have for the existence of the *t*-stems.

We remember that we faced this issue in Chapter 2 with the adverb ἀνιδρωτί, which corresponds to the family of ἱδρώς, ἱδρόω, "to sweat", and means "without sweat/work". The problem lay in the fact the Greek word for "sweat", ἱδρώς, seems not to be a *t*-stem in Homer and, therefore, the presence of a *t* in this adverb could have put into question our conclusions about when the *t* entered the nominal paradigm. A temporary solution we came up with there was the fact that there are other words, like ἐγρηγορτί, from the verb ἐγείρω and meaning "awake", which do not have a *t* in their stems; therefore, the –*ti* could simply be an adverbial ending added to a certain stem in order to make adverbs. In other words, our conclusions about the fact that the *t* is post-Homeric in the paradigm of ἱδρώς were not undermined by the existence of a *t* in the adverb ἀνιδρωτί, because the presence of the *t* here would not be the result of a *t* stem,

to which a possible locative ending was added, but the effect of the addition of a –*ti* adverbial ending to a non-*t* stem.

There is, however, a major problem with this solution, namely the fact that we need to know exactly what these non-*t* stems were. In particular, in our case, the problem lies in the fact that ἱδρώς is an *s*-stem; therefore, the addition of a –*ti* adverbial ending should have produced a form like *ἀνιδρωστί if in fact the formation of this word had taken place before the word itself became a *t*-stem. On the other hand, even our above argument about the origin of this kind of formation in a frozen locative does not stand to careful scrutiny. This is because the whole argument becomes in this way circular: since there were practically very few genuine *t*-stems in PIE, it would be hard to believe that the only traces they left in any language are in these kinds of Greek adverbs, which, moreover, are *t*-stems neither in Greek nor in PIE.

We can see now therefore how important it is to find out more about these adverbs. This is because even if we came up with the above solution for ἀνιδρωτί, we would still have to argue about the origin of the *t* in –*ti* and whether it originated or not in a PIE *t*-stem, a possibility which, at first glance, seemed at least somewhat implausible. We will see below that the complications from this problem will be even greater than the ones sketched hastily above.

But what kind of adverbs are we dealing with here?

Greek possesses a series of adverbs, which end in –*ti* or, more generally, in –*i*. They are quite numerous in the Greek lexicon, and the formation seems to be old. A word

like ἀβοητί in the Ionic-Attic dialect[162] has its correspondent ἀβοᾱτί[163] in Doric, a fact

which suggests that the –*ti* adverbs may go back as far as Common Greek.

These adverbs have a very interesting property, namely that the majority[164] are

composed with the privative prefix ἀ- : ἀ-μογητί, ἀ-μαχητί, ἀν-ουτητί, ἀν-

ιδρωτί, ἀν-αιμωτί, ἀν-ωιστί (all Homeric), ἀβοατί (Pindar N 8,9), etc.

There are several intriguing[165] facts about these adverbs. I list them below:

1) the *t* does not become *s* before *i* in the Ionic-Attic dialect

2) they are both deverbative and denominative

3) the accent falls on –*i*

4) the quantity of –*i* can be either long or short in these adverbs and, most

importantly, sometimes, both in manuscripts and in inscriptions, -*i* is represented by

–*ei*.

The fact that the –*ti* adverbial ending does not become –*si* in Ionic-Attic is still

unexplained. Paul Kretschmer[166] as early as 1890 tried to explain the maintenance of *t* in

such cases by arguing that the –*ti* represented the desinence of a former locative sg. and,

therefore, the paradigm of the noun kept the *t* intact, by analogy, like in the case of the

dative sg. of the themes in *t*, where the other cases did not allow that *t* turn into *s* (or

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[162] The word is not attested as such in Ionic-Attic, although Liddell-Scott gives it in this form. The assumption is based, probably, on the fact that there exists the corresponding adjective in –*tos*, ἀβοητός, for example in *Epigramata Graeca* 240 (Smyrna). In any case, the long vowel in Doric would have ended as η in Ionic-Attic.
[163] With second "*a*" long.
[164] A list of them can be found as early as Kissling, KZ17/1868, p.213 (*Die Verwendung der Casus zur Adverbialbildung im Griechischen*), who treats the adverbial endings in Greek. A complete list of them is found in F. Bader, "Neutres grecs en –*ti*: absolutifs et privatifs verbaux", BSL 65, Paris 1970. Also in Schwyzer, *Griechische Grammatik*, Erster Band, p.622sqq)
[165] There are, to my knowledge, very few explanations for these facts, especially for 1 and 3.
[166] KZ 30/1890, p.565 sqq: "Der Wandel von τ vor ι in σ".

restored an assibilated form to –*t*-) before the dative ending *i*[167]. Nevertheless, this explanation doesn't seem to me very convincing, since the "freezing" of this locative should have taken place in Common Greek; therefore, it is hard to sustain the argumentation that the paradigm could have maintained the *t* in such adverbs in Ionic-Attic, where there was no such paradigm to act analogically on *t*. There are other explanations given by Kretschmer for this anomaly, although they themselves are not very well supported by any phonetic theory: the *ti* was preserved in Greek when it bore the accent or when it was in auslaut[168]. This is indeed the case here, since the –*ti* is accented in such adverbs and it is also in auslaut, although Kretschmer seems not to care about these facts and sticks with his former opinion that it was the paradigm which determined that the *t* was immune to assibilation.

The most important fact in the case of these adverbs is the variation which both the manuscripts and the inscriptions show with respect to the quantity of the *i*. The most complete study so far can be found in F. Bader[169]; we shall try here to summarize the relevant data.

a) adverbs with –*tĭ* attested metrically

Composed ones:

- ἐγκονητί (Pind. N3,36)= "being active",

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[167] This is the case with the present active participle as well, where the dative ending is –*onti*, not –*ousi* as it should be by *t* becoming an affricate and compensatory lengthening

[168] Cf. τίκτω, βελτίων, ἔτι, ἄρτι, etc. Some of them could be explained through analogy, like, for example, τίκτω<*τίτκω, where the *t* in the reduplicated syllable was kept because of the following *t*.

[169] Bader ibidem.

- ἀμαχητί[170] (Φ437)= "without fight",

- ἀβοατί (Pind.N 8,9)= "without cry",

- ἀστακτί (Soph.O.C.1251)= "not in drops",

- ἀμογητί (Call.H.Art.25)= "without work",

- ἀπονητί (Eur.Fr.Lyr.3)= "without pain",

- ἀστενακτί (Eur.Fr.307)= "without sighing",

- ἀκλητί (Com.ap.Zen.2,46)= "without being called".

    Simple ones: most of them are derived from denominative verbs ending in –ζω:

- ὀνομαστί[171] (from ὀνομάζω)= "by name" (Call. Aet. Oxy. 2080.81),

- ἀνδριστί (from ἀνδρίζω)= "like a man" (Ar.Ec.149; Theocr.18,23),

- ἀνθρωπιστί (from ἀνθρωπίζω)= "in the language of men" (Soph.Fr.827),

- μελεῖστί (Ω409, ι291, σ339)= "by members".

Then we have the adverbs based on denominative verbs which show the ethnicity of a

language, way of being, etc:

- Δωριστί (Call.Iamb.1,354, etc[172])= "in Doric language",

- Ἰαστί (Com.Adesp.415, Pl.R.398e)= "in Ionic",

- Ἑλληνιστί (Pl.Ti.21e)= "in Greek",

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[170] Nevertheless, it is ambiguous because it is at the end of the hexameter. It has the form ἀμαχητεί Xen., Cyr.4,2,28 and Hdt.1,174.
[171] Also written ὀνομαστεί in SIG 355.18(Ilion, IV-III BC)
[172] The examples are numerous, in general I will give for each word only one or examples in order to make the case clear.

- Λυδιστί (Cratin.256)= "in Lydian",

- Σκυθιστί (Soph.Fr.473, Hdt.4,27,59)= "in Scythian",

- Θρακιστί (Thcr.14.46)= "in Thracian",

- Μαιωτιστί (Thcr.13,56)= "in Maeotian",

- Πελοποννασιστί (Thcr.15,92)= "in the Peloponnesian language", etc.[173].

    b) formes with –tī attested metrically[174]

Most of these forms are privative and can be found as early as Homer:

a. ἀνωιστί[175] (δ92)= "unlooked for",

b. ἀνουτητί[176] (X371)= "without wound",

c. ἀνιδρωτί[177](O228)= "without sweat",

d. ἀναιμωτί[178] (P363)= "without blood".

In addition to these forms there is also the adverb ἐγρηγορτί, a Homeric form (K182)

built on the perfect stem of the verb ἐγείρω, from which is also formed the adverb

ἐγερτί, with short I, as in Soph.Ant.413 or in Heraclitus 63.

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[173] See Bader, ibidem, p. 91.
[174] For example X371: Ἕκτορος· οὐδ'ἄρα οἵ τις ἀνουτητί γε παρέστη.
[175] From ὀίομαι.
[176] Οὐτάω
[177] The corresponding verb is ἱδρόω (B390, etc); we can see thus once more that the "t" in the nominal stem does not presuppose a t-stem. This is also the case with the verbs above.
[178] It is unclear where the ω comes from. Homer uses the adjective ἀναίμων=bloodless (E342). There is also the adjective ἄναιμος with the same meaning (Pl.Ti.70c). Bader is of the opinion that it is built after ἀνιδρωτί (Bader, p.93). Nevertheless, there is a gloss αἱμόω, belonging to Hesychius; the given word, in my opinion, could be built following this verb in its privative form or by simply starting from αἱμόω; see also Ernst Risch, οὐκ ἀθεεί, MH29/72,p.65-73.

The most difficult problem here is that –tῑ is not the only form in which this

adverbial ending has come to us. The manuscripts and inscriptions present the variants –tῐ

and –tei, so that, for example, the Homeric adverb ἀνιδρωτί shows also in some

manuscripts the variant ἀνιδρωτεί[179].

The post-Homeric data show the same variability as well[180]. One most important

fact occurs in Sophocles, who uses ἀστακτί in O.C.1251 with short ῐ, but with long ῑ in

the same text, at 1646. Beside this we have ἀνοιμωκτί, with long *i*, in Aj.1227, with a

manuscript variant in –τει[181].

Other adverbs of this sort are:

- ἀφρικτί (Call.H.Art.65)="without shivering",

- ἀκλαυτί (Call.Fr.298.2)="without crying"[182].

There are also ῐ variants of –εί ending adverbs: ἀκονιτει[183] (SIG36B) vs.

ἀκονιτί (SIG36A), which are found at Olympia and Delphi respectively in the first half

of the 5th century B.C. [184] and are the oldest evidence of such variation in inscriptions. At

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[179] Contrary to what Bader believes (Bader, ibidem) there is variation in the manuscript tradition for this kind of adverb. Although the edition of Allen & Monro does not show the variation, the latest edition of Martin West (*Homeri Ilias*, Stuttgart-Leipzig-Munchen 1998-2000) reads all the variants with the ending –τεί: ἀνιδρωτεί, ἀμογητεί, ἀμαχητεί, ἀνουτητεί, etc. We can see that those adverbs, about which we are not sure from the Homeric text whether the final syllable was long or short , e.g. ἀμογητεί, are treated this way.
[180] We cannot do otherwise but to rely on manuscripts. "Homeric", in this case, cannot be stated for sure as belonging to the eighth century, but to the period to which the manuscripts belong, which is post-Alexandrian in any case. This goes for the "post-Homeric" data as well.
[181] From οἰμώζω="to lament".
[182] The variant in –εί is rejected by some scholars; see Bader, p.93.
[183] The first *i* is long, which means that the adverb is not built from the noun κόνις, which has ῐ, but from the verb κονίω, which has a long *i*. The manuscripts also hesitate between the two forms: - τεί in Dem.19, 77 but–τί in Dem 18,200, and Thc.4,73,2.
[184] Dated 480 and 476.

about 450 we can find in Crete[185] an inscription with ἀδαιτηι, with graphic –ηι

standing for - ει. Other epigraphical evidence shows ὀνομαστεί next to ὀνομαστί[186],

πατριαστεί next to πατριαστι[187].

    To sum up, we can see the following:

1) there is variation, both in inscriptions from as early as 5th century B.C and in

manuscripts dating from Middle Ages, between *–tei, -tī, -tĭ*. What is strange is that there

is no variation between *ĭ* and *ī* except for the example in Sophocles below. On the other

hand, adverbs in - ιστί seem to have the final short.

2) the hexameter shows in the places where we can be sure about the length that Homer

has either a *ī* or an *-ei* as the ending for these adverbs. This could be a proof that the

original form is the one with either-*ei* or *–ī*.

3) In Sophocles the same word ἀστακτί has both -ī and –ĭ in the same[188] play.

We need now to mention other adverbs, which are similar to these above and which are

still an object of dispute in whether they should be categorized as being built in the same

way as the adverbs ending in –τεί/- τί are[189].

    Other Adverbs:

    Greek has another series of adverbs which are similar to the ones analyzed here.

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[185] Del. 179 a 13, see Bader, ibidem, and Schwyzer, p.623.
[186] SIG 355.13 (Ilion, 4-3 B.C.) and IG I² 57.44 (5B.C.) respectively.
[187] SIG 793.13 (1 A.D.) and, respectively, SIG 1023.32 (3-2 B.C.) both in Cos. The meaning is "with the father's name".
[188] OC 1251 and 1641.
[189] See Jacobson, Hermann, *Glotta* 16/1928/p.54; Bader, p.86; Risch, Ernst, MH29/1972, believes correctly as we shall see that these adverbs are related, "eng verwandten".

Nevertheless, their stem does not end in - τεί/- τί, but in - εί/- ί. A striking fact about

these adverbs is that they display the same variation in their ending as the adverbs that

have the dental in their stem. There is, however, a difference: this variation does not exist

when the stem of the adverb ends in a vowel.

Here are some examples of such adverbs:

- ἀσπουδεί= "without effort" in Θ512, Ο476[190], etc; the variation in - ί occurs in

  the manuscripts;

- ἀσπονδεί= "without having a concluded treaty" and ἀσυλεί= "inviolably", in

  the formula ἀσυλεί καὶ ἀσπονδεί, in Attic inscriptions[191] and Ionic ones[192];

  the variant in - ί is shown in Rhodos[193].

- ἀμισθί= "without reward" can be found in a fragment from Archilochos[194],

  where as the - εί variant is shown on a inscription from Eleutherna in Crete from

  the 5th century[195].

  There are variants in the manuscripts for πανδημεί= "with all people",

ἀυτονυχεί[196] and ἀυθημερεί= "in the same night/day"; παμμαχί= "in which all

fight" is written with –ί in A.D.Conj.234.9, but there is ἀμαχεί= "without fight", with

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[190] In the formula, with - εί as the first syllable of the third foot: μὴ μὰν ἀσπουδεί γε νεῶν ἐπιβαῖεν ἔκηλοι.
[191] IG I² 58, 14 and 133,9; from the second half of the 5th century.
[192] Erythrai, from 357/55, Syll.³ 168, 8f
[193] Syll.³110,40, from 410 B.C.
[194] Fr. 41B: ἀμισθὶ γάρ σε πάμπαν οὐ διάξομεν.
[195] Collitz-Bechtel 4957 a 5.
[196] Found in Il.8.197.

- εἴ, in Thc.1.143, X.An.1.7.9; ἀμαχί can also be found in Phot.p.88R.

On the other hand, as I said above, there are at least two adverbs which have a vowel before these endings and which do not show this variation: ἀθεεί[197] = "without (the help of a) god", αὐτοβοεί[198] = "with immediate cry". The fact can be explained by a tendency to avoid contraction and the ensuing loss of distinction between the root and the ending[199]. Other adverbs of this sort are pretty numerous; some examples can be found both in Bader and Risch[200]. From the data above we can see that the variation is not a matter of dialects[201]; that is to say, all dialects display the same variation, which suggests that the process must be old.

Before trying to explain this "mess" in the various forms, we should mention here an important fact: most of these adverbs have a correspondent adjective in –τος or simply a thematic adjective –ος:

- ἀνιδρωτί- ἀνίδρωτος= "without having sweated"

- ἀμογητί- ἀμόγητος= "unwearied"

- ἀσπονδί- ἄσπονδος= "without drink-offering" or "to whom no drink-offering is poured"[202]

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[197] σ353.
[198] Thc.2.81, 3.113, etc.
[199] For example, to avoid confusion with a form like ἀθεί.
[200] Loc.cit. They both make a case of the fact that the - εί ending seems to be older. The evidence from inscriptions is, however, very scanty and, besides, they do not take into account the simple fact that all dialects display the same variations. The inscriptions found in Olympia and Delphi cited above, p.2, prove also my point. Risch himself is circumspect here, see Risch, p. 68.
[201] See above the epigraphical evidence for ἀμισθί, ἀσυλεί
[202] The double meaning, passive and active, has probably to do with the reciprocity involved in the process: actually the verb means "to make a treaty", where the offering involves both the person who is making the offering and the one who is accepting it.

- ἀμαχητί- ἀμάχητος= "without fight"

- ἀωρί[203]- ἄωρος= "untimely", Lat. *intempestivus*

- ἀθεεί- ἄθεος= "without god"

- ἀνουτητί- ἀνούτητος= "unwounded"

- πανδημί- πάνδημος= "belonging to all people", etc.

  Sometimes the corresponding adjective is one in *–ēs*:

- παμμελεί(Porph.Chr.94)- παμμελής(LXXMa.7.16)= "in all kinds of

  melodies"

- παμπλεθεί(Ev.Luc.23.18)- παμπλεθής (X.HG.6.5.26)= "with the whole

  multitude"

- αὐτοθελεί(AP7.740)- αὐτοθελής(AP9.79)= "voluntarily"

- αὐτοετεί[204](Theoc.28.13)- αὐτοετής(J.AJ3.9.3)= "within the same year"

  Some other adverbs are derived from the *–si*< *–ti* stems; they display most of the

time an *–ei* ending:

- αὐτοψει[205](Jul.Ep.204ʹ) - ὄψις= "with one's own eyes"

- αὐτολεξεί(Ph.2.597)- λέξις= "in express words"

  Others are derived from *s*-stems and also display both the *–ei* and the *–i* ending:

- παγγενεί(Xanth.10)= "with the whole race", from γένος.

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[203] Ἀωρί with short I (Theoc.11.40, with clear locative meaning (νυκτὸς ἀωρί) = "at the end of the night", but also ἀωρεί (P.Fay 19.2, 2A.D.)
[204] In the Odyssey there is an adverb αὐτοετές="within the year"(Od.3.322)
[205] Given by Liddell-Scott with a - ψί variation

- πανεθνεί (Str.5.4.6) and πανεθνί(LXXWi19.8)= "with the whole nation", from

  ἔθνος

Finally, there are adverbs which derive from consonantal stems and which display

the same variation, but not always:

- αὐτοχειρι[206] (Lyc.1.22; Paus.7.16.6) deriving from αὐτόχειρ = "with one's

  hand, creative" (S. Ant.900, 1315); without variant.

- αὐτομηνί(Attic.ap.Eus.PE15.4)= "in the very month"; without variant.

- παμπαιδί (D.C. 41.19) = "with all the children"; without variant.

- παγγυναικί (Ev.Luc.23.18) = "with all the women"; without variant.

- αὐτοποδί (D.C.50.5)= "with one's own foot"; without variant.

- αὐτονυχί(- εί)[207] (Il.8.197; Arat.618; A.R.4.1130)= "in the same night"; the

corresponding adjective is in –ios: αὐτονύχιος attested in Hesychius.

- αὐθημερεί(- ί) (Inscr.Prien.28.17/2B.C.)= "in the same day", etc.

Now, before analyzing the different scholarly opinions on the origin of these

adverbs, we shall enumerate the Homeric[208] occurrences of them:

ἀθεεί, ἀσπουδί, μεταστοιχί, τριστοιχί, αὐτονυχί, ἀμαχητί, ἀμογητί,

ἀνιδρωτί, ἀνουτητί, ἀνωιστί, ἀναιμωτί, μελεϊστί, μεγαλωστί, ἐγρηγορτί.[209]

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[206] Herodotus uses αὐτοχειρία, with the same meaning(1.140). Callimachus has αὐτοχερί (Epigr.22).
[207] There is also a late (J.AJ17.9.5) αὐτονυκτί
[208] Chantraine, *Grammaire Homerique,* p.249, Paris,1958.
[209] Chantraine gives also ἕκητι, ἀέκητι. Nevertheless, they present a serious problem because they do not have oxytonic accent. Conversely, Bader p.94, thinks that adverbs like ἐθελοντί, ἑκοντί are casual forms, but she does not say which. It is obvious they are not datives because of the accent. This is a real

We remember also that there are variants in –*ei* of these adverbs and that the privative ones have a long accented –*i* where we can tell the length. Nevertheless, we also notice that a word like ἀμογητί can have the last –*i* short in Callimachus. This fact shows, in my opinion, that even in Homer the privative adverbs cannot be all considered to have the final –*i* long. Ἀστακτί in Sophocles shows that the same author could use either variant depending on the necessities of the meter. In fact, a word like ἀνιδρωτί, with the structure ~--~, could not have been used in the hexameter.

These adverbs have presented numerous problems to linguists, precisely because of this variation in the quantity and form of the last syllable, not to mention even the stem ending in *t*. The issue of these adverbs was taken up as early as Kissling[210] and Mahlow[211]. Kissling believed that there were only adverbs in –*ei* and *ī* and passes over the *ĭ* in silence. He mentions only the fact they might be former instrumental-locatives[212]. Mahlow saw that there were adverbs both in –*ĭ* and in –*ī* (-*ei*). For him the former derived from an ancient locative from the consonantal stems (Adj. αὐτόχειρ- Adv. αὐτοχειρί), whereas the latter type represented a former locative[213] of adjectival themes in –*i*, which, in his opinion, were replaced by themes in –*yo-*[214] (type πανδήμιος- πανδημεί). The –*ī*

problem, since we are not sure where the accent was in oblique cases for thematic participles; see Sihler, p.615. It seems rather that –*ti* could be analogical here.

[210] KZ 17/1868, p.213sqq.

[211] *Die Langen Vocale A, E, O in den Europaischen Sprachen,* Berlin 1879, p.120sqq.

[212] He also believed that the adverbs in –*ei* are denominatives whereas the ones in –*i* are deverbatives. He also does not care about the variances. It is also not clear how he views this "instrumental-locative" case.

[213] The locative was built in this case on the lengthened grade, so it had the form –*ēi*, which gave in Greek –*ei*.

[214] He makes the comparison with Latin where older –*os* type (*sublimes, bicornus, perennus*) was replaced by the –*is* type (sublimis, etc.)

itself was a former neuter plural, in which a contraction took place that made former *–ia* into *–i*[215].

As we can see, Mahlow does not explain the variants of the same words and cannot have a plausible explanation for the *–ī*. Nevertheless, we should keep in mind at this time his arguments for a locative origin of these adverbs.

Schulze[216] analyzes the non-*t* adverbs of this sort such ἀσπονδί, ἀσυλί, etc., and tries to avoid the *t*-stem adverbs. His conclusion is based on a comparison with Slavic and Baltic languages, which actually constitute the main object of his study. According to him there is a parallel between the Slavic forms *pravĭ* (adv. "rightly")-*pravŭ* (adj. "right"), *prěmĭ* (adv. "with justice")-*prěmŭ* (adj. "just") or the Baltic[217] forms *pamaži*[218](adv.)-*mãžas* (adj. "small") and the Greek forms ἀμισθί- μισθός, etc. Other Baltic adverbs such as *tolì, artì,* or Slavic composites such as *udobĭ, prěprostĭ* are further adduced to illustrate his opinion about the common origin of all these adverbs ending in *–ĭ*. In his opinion, these adverbs are former PIE neuter adjectives in *–i*, whereas the Greek forms in *–ei* should be former locatives of the *–o-* stems. This is supported by the fact that various IE languages show a tendency to have composite adjectives in *–i*:

- Latin *exsomnis*, *imberbis*, *inermis*;

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[215] He could not know, obviously, the laryngeal theory by his time, since he compares this example with Latin *trīginta*, where indeed the *ī* is due to a laryngeal. In his opinion, this contraction happened in Latin and in our adverbs, but it did not happen in τρία. In any case his explanation for *–ī* is not valid anymore.

[216] M.S.L.19/1916, "Notes Baltiques et Slaves", p.36.

[217] Baltic displays a dative ending in *ī,* which corresponds to the Vedic locative *védī* and to the dative *ūtī*. Greek dialects also display a dative in *ī* for the themes in ι (πόλι), this is perhaps not a Greek phenomenon, but a PIE one, with *ī* taken from the locative; see Gerrulis, *G, Archiv für Slavische Philologie*, Berlin 1923, p.77sq, with bibliography about Greek: Osthoff, M.U.IV, 385; also Sihler, 316sqq. In other words, Gk. *polī* would come directly from the locative, not from πολι- ι.

[218] "Pa" is a prefix.

- Sanskrit *pratyardhi-*= "to whom the half belongs;

- Avestan *avimiθri-* = "Mithra's enemy", etc.

In this category Schulze includes τριστοιχί, ἀσυλί, ἀμιστί("without closing the mouth"). There is, however, a big problem with his arguments, namely the fact that a word of the type τριστοιχί, for example, has a correspondent adjective in –*os*, which is τρίστοιχος. The whole argument then about forming adjectives with themes ending in *i* becomes untenable. Another flaw of his analysis of the Greek case is that he does not take into account the great variability of the Greek data, so that he does not mention in this study[219] anything about the fact there is also -*ī*, not only -*ĭ* and –*ei*. This is left totally unexplained by Schulze. What is worthwhile to notice here is the fact that these adverbs are linked to ancient locatives of the themes in –*o*-.

We mentioned Kretschmer before. Brugmann also believed[220] that some of these adverbs (τριστοιχί, ἀμισθί, etc.) are former neuter adjectives in the nominative-accusative. But, like Schulze, he does not take into account the fact that there are already adjectives in -*os*[221]. Wackernagel[222] simply believes that the –*ei* forms are due to a former locative ending, where the ones in –*i* are former neuter adjectives used adverbially in the

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[219] Nevertheless, in *Berl. Phil. Wochenscrift* 1896, p.1330-37, 1362-68 (paper collected in Schulze, *Kleine Schriften*, Gottingen 1966, p.656-7) he believes that the *ī* is either an error of the scribes or due to metrical lengthening ("Iktusdehnung"). He also states here that the –*tĭ* ending is a result of a locative of a consonantal stem in dental; this takes us again to the circular argument at the beginning of this chapter.
[220] KZ 27/1910, p. 233 sqq.
[221] See above the argument against Schulze. The claim could be made, of course, that the adjectives in –*os* are a recent creation, after the disappearance of the –*i* adjectives. This is contrary to what we have established above, namely that the –*i* adjectives are more recent.
[222] *Vorlesungen über Syntax*, vol.II, p.290.

way Latin has the adverb *impune* from the neuter of the adjective *impunis*[223].

Wackernagel states very clearly that the thematic adjective is younger than the stems in

-*i*[224]. And, in regard to the –*ei* ending, Wackernagel simply says that it was taken from

the locative without further comment[225].

Jacobsohn[226] rejects the argument that –τί might represent a locative[227] of a *t*-

stem on grounds pertaining to the fact that the *t*-stems in Greek function as *nomina*

agentis in compounds[228]: ἀδμής, ἐπιβλής, etc. Consequently, words like ἀμαχητί,

ἀμογητί, ἀνιδρωτί would not, in his view, belong in this category. On the other hand,

Jacobsohn rejects also the opinion that these adverbs could be frozen accusative neuters

in –τι, because Homer has nouns in –τις,-σις derived only from primary[229] verbs, which

is not the case with the words mentioned above.

Schulze and the others have serious problems indeed in seeing the origin of these

adverbs in dental stems. They seem not to have realized that there were no PIE stems in

dentals, especially these, which are the basis for our adverbs. Schulze's position is more

interesting, and it makes the whole problem more complicated: these themes in *t* were the

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[223] *Illunis* or *illiberis* in Latin are given as parallel examples for Greek ἀσέληνος, ἄτεκνος.
[224] "In Einzelfällen ist das zu –*is* gehörige adverbiell gebrauchte Neutrum auf –*e* (aus-*i*) älter als das durchdeklinierte Adjectiv"; ibidem.
[225] "Dieselben Adverbien [those in –*i*/AC] und analog gebildete kommen schon in alter Zeit mit der vielleicht lokativischen Endung –εί vor."
[226] *Glotta* 16/1928, p.54.
[227] This opinion is found in W.Schulze above, note 57, Kretschmer KZ30,586, Fraenkel, *Nomina Agentis* I11, Debrunner, *Wortbildung* 177,352.
[228] When they are the last term of a compound.
[229] Ανιδρωτί is, nevertheless, derived from the verb, otherwise it would have shown the old stem in *s* in ἱδρώς. Jacobsohn sees it as "Denominativum".

ones which were extended further to the –*tā*-[230]stems. This process can still be seen in the etymological relations between words like ἐγερτί and the name of the dog Ἐγέρτης. In other words, these adverbs would be our sole basis for the reconstruction of a stage in Greek in which there were nouns in a dental[231], whose stem was further extended either to –*ti*- or to –*tā*-, while they themselves vanished from history, leaving their traces in the adverbs we are dealing with here. Although it is not impossible, this scenario seems very unlikely and, in any case, very hard to prove, if not impossible.

Bader gives the most general picture about these adverbs and, given the desperate situation, she comes up with a most extreme solution: all three variants, -*tei*, -*tī* and –*tĭ*, are the result of former case endings. She believes that there are actually two series of adverbs, one in –*ĭ*,-*ei* (type ἀωρί, ἀθεεί), and the other in –*tĭ*, -*tī*, i.e. the type of adverbs with which we started our discussion. Despite making this dichotomy from the beginning, she focuses only on the second series. In her view, the –*tĭ* ending is a former accusative neuter[232], which may reflect a stage in PIE (pre-PIE?) where the language was ergative and this ending was the one of an absolutive[233]. An example of an absolutive could be found in Pindar, N.8,9 with the coordination of ἀβοατί and ἕκοντες:

ἀβοατὶ γὰρ ἡρώων ἄωτοι περιναιεταόντων

ἤθελον κείνου γε πειθεσθ' αναξίαις ἑκοντες

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[230] Ionic-Attic nouns in -της, Doric in - τας.
[231] Only in Greek (Proto-Greek), not in PIE.
[232] These would be accusatives of neuter nouns ending in –*ti*.
[233] In ergative languages, the ergative is the case of the agent who performs the action denoted by a transitive verb (either nominative or instrumental), whereas the absolutive is the case which characterizes the subject of an intransitive verb and object of a transitive verb.

"Since the best of the surrounding heroes wanted to listen to his behest willingly." Bader picks actually up an idea which belongs to Wackernagel[234], who confines himself only to say that "Diese –ti- Bildungen funktionieren nach Art der einst allgemein indogermanischen Absolutiv".

It may indeed be that in the example above from Pindar ἀβοατί could be regarded as functioning similarly to an absolutive. The problem is, however, whether what we find in Pindar can be attributed to a PIE or pre-PIE stage. On the other hand, Bader seems to omit the fact that ἕκοντες is in the plural, whereas ἀβοατί would represent the singular if indeed her assumption about the –ti accusatives were correct. Consequently, I believe that Bader went too far in interpreting ἀβοατί here as a former absolutive.

Another "absolutive" interpretation is given to words like Ελληνιστί, ὀνομαστί, etc, where only the short *i* is attested and, sometimes, the –*ei* variant, which Bader considers, perhaps correctly, as analogical to those nouns where it was etymological. In her view, these words are former accusative neuters. Nevertheless she illustrates this with an example which shows exactly the contrary: Ελληνιστί ξυνιέναι[235] is presented incompletely; the whole passage is τὰ πάντα Ελληνιστὶ ξυνιέναι, "to understand everything *in* Greek", which obviously sheds a completely different light on the whole syntactic construction and makes these adverbs be exactly

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[234] *Vorlesungen über Syntax* II, Basel 1957, p.288.
[235] "To understand Greek", Xen.An.7,6,8.

what they are, i.e. adverbs of manner whose origins are not in the –*ti* nouns, where Bader wants them to be.

The –*tī* adverbs for Bader have a more "spectacular" origin: they would be former instrumentals of –*ti* stems, in the way we find in Sanskrit an *ī* ending in the instrumental of nouns whose theme is in *i*[236]: *cittī, ūtī*, etc. One reason for this would be the syntactic function of these adverbs, especially those privatives, which is indeed instrumental[237]. In this case a PIE instrumental ending -*iH[238] would have given in Greek the long vowel which explains the origin of our adverbs. This assumption, however, has a flaw[239], namely the fact that in Greek the result of –*iH# is not *ī*, but –*ia* or -*ie*[240], which is shown, for example, by cases like PIE *triH$_2$ "three"> τρία, Ved. *trī* or the dual for "eyes" *H$_3$ek^{w}iH$_1$>Hom. Ὄσσε, Ved. *akṣī*.

We see that under these conditions Bader's arguments, however bold they might be, are very hard to maintain.

A last attempt to solve the problem was made by Risch[241]. But his article tries to solve only the problem of the –*ei* ending, which for him is a locative. What is interesting is that the –*tei* ending is not, in his view, old. Thus, this ending would have its origin either in verbal adjectives like ἀμάχητος or in nouns like ἀδαιτεί, where the *t*

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[236] See Wackernagel, *Altindische Grammatik III*, p.145sqq; Burrow, *The Sanskrit Language*, Delhi 2001, p.232.
[237] Bader express doubts whether the ending could be locative, since very few of these adverbs seem to have been locatives in their syntactical function. I do not think this could be a problem: these adverbs could be simply instrumentals which took locative endings.
[238] H is a laryngeal.
[239] See for this Hajnal Ivo, *Sprachschichten des Mykenischen Griechisch*, Salamanca 1987, p.84, n.141.
[240] See Sihler, p.47
[241] See note 17.

belongs etymologically to the theme of the noun. He also believes that words like

ἀμαχητί(-εί?[242]) are a blend and a compromise solution between ἄμαχος/ ἀμαχεί,

which is older, and ἀμάχητος. He gives several examples of parallel words like

ἄμαχος- ἀμάχητος: ἄμετρος (Sim.543,22 P, Kritias 2, 4 D[= 3,4 B])- ἀμέτρητος

(τ512, ψ249), ἄτιμος (A171,etc)- ἀτίμητος(I648), ἄπυρος (I122, Ψ267, etc.)-

ἀπύρωτος (Ψ270). The main reason for this is the parallelism he finds between words

like ἀμαχεί and the Sanskrit adverbs *askambhané* (RV 10,149,1 = "without

support"/*skhambhana-* = "support"), *anudré* (RV 10, 115,6 = "without water", *avaṃśé*

(RV 2, 15,2 = "without a bamboo-stick") or in Avestan *anareθe* Y65.9, which seem to

show the same construction (and accent!) as the Greek examples.

 As for the adverbs written –*ī* or –*ĭ*, Risch confines himself[243] to mentioning the

possibility that they originate either in accusative neuters in –*i* or in instrumentals in –*ī*. A

further proof[244] of this would be the existence in Sanskrit and of adverbs like *prá-yukti*

(RV 10,30,1 = "by being attached forward","auf Antrieb"), *ní-tikti* (RV 6,4,5 = "curious,

desireful"), or the Young Avestan *apaitibusti* (<*a+poti+budh- = "to recognize, to be

aware of"), which are explained either by accusatives of neuter or by shortened

instrumentals in –*ī* [245].

 I previously addressed the assumption that the –*ī* might come from an

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[242] "Vom Homerischen Material aus sieht es so aus, als ob ἀμαχητί eine (kunstliche?) Kreuzung aus ἀμαχεί (seit Thuc. und Xen) und ἀμάχητος (bzw. Οὐδὲ μαχητός) ist"; Risch, p.72.
[243] Risch, ibidem, p.72, n.20. Also Humbach H., *Corolla linguistica, Festschr. F. Sommer*, Wiesbaden 1955, p.92-96.
[244] Already suggested by Schwyzer, Gr.Gr. I623.
[245] Wackernagel-Debrunner, *Altindische Grammatik* III 146sqq. Other

instrumental. This is not possible in Greek for phonological reasons. In respect to Risch's argument that the *–tei* adverbs are a later analogical formation, this cannot be proved: the adjectives in *–to-* are old enough, of PIE[246] date, and they might have had their own locative ending as well.

The existence of long and short *i*'s causes headaches, of course, and the manuscript tradition is not very helpful in this respect. But perhaps the ancient grammarians could be more helpful on this. Herodianus[247], in the 2nd century A.D., tries to explain how to use orthographically - εἴ and - ἴ with different adverbs of this sort. Being concerned with the orthography, Herodianus does not give any indications about the lengthof *i*[248]. The first striking thing in his observations is that he links the form of the ending with the segment(s) that precedes it. For example, he believes that the adverbs should be written with *–i*[249] when preceded by

- β (ἀτριβί, ἀβλαβί),

- κ (πανοικί, ἐνοικί),

- γ (ἀμιγί),

- π (ἀτρεπί, ἀρρεπί),

- πτ (ἀτρεπτί),

- τ (ἀκονιτί, ἀμογητί, ἀνιδρωτί),

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[246] See Chantraine, *La formation des noms en grec ancien*, Paris 1933, p.299.
[247] Epim.254sqq.
[248] At this date there was probably, in general, no distinction between short and long vowels. See Meillet, *Aperçu d'une histoire de la langue grecque*,Paris 1965, p.284. Nevertheless, even at this date a grammarian like Herodianus could have known what originally was happening. The fact that he does not say anything about this is due probably to his intention to write only about orthography.
[249] "Διὰ τοῦ Ἰῶτα γράφονται"

- στ (ὀνομαστί),

- ῥ (ἀμετρί),

- ν (νηποινί, ἀθρηνί),

- κτ (ἀστακτί, ἀστενακτί).

All the rest are written with - εί. Exceptions are given to all these cases. For example,

in the case of ν one should have ἀφανεί; in the case of ρ one should write αὐτοχειρί,

ἀωρί, αὐτανδρί. Now, it is hard to see any logic for assigning one ending or another in

all such cases. For example, what would be the reason for ἀτριβί being written with –*i*

when its corresponding adjective is ἀτριβής; a similar situation occurs with the

adjective ἀφανής, whose corresponding adverb is written with - εί: ἀφανεί. Why

would one write the adverbs whose theme end in β, γ, etc., with the ending –ι and

others, ending in λ, μ with -εί: ἀμελεί, ἀτρεμεί (with corresponding adjectives

ἀμελής, ἀτρεμής)?

I believe that the only conclusion that can be drawn from what Herodianus has to say

is that by his time there was no way of predicting whether such an adverb had to be

written with –*ei* or –*i* ending. In this way, if the 2nd century A.D. a grammarian was

unable to predict logically when one should have used one ending or the other, the

legitimate question would be whether there was ever a time in which such a prediction

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was possible. The examples found in Sophocles[250] with the use of short and long *i* for the

same adverb, ἀστακτί, and the example in Callimachus of ἀμογητί with short *i*,

whereas in Homer similar adverbs are written either with long *i* or –*ei*, show that the

confusion was more than a matter of manuscript error; thus it may be that the speakers

themselves couldn't predict what form the endings should have had. I did not discuss

here the *ī*. This is a very difficult task, but I think it is quite obvious that phonological

grounds prevent us from agreeing with Bader in considering it the result of a former

instrumental ending. At the same time, I cannot see a cogent argument for maintaining

that the short *i* is due to a former absolutive or accusative neuter case. The origin of our

manuscript tradition for long *i* must be sought somewhere else. And I think that Schulze

was not far from the truth when he argued for scribal error.

The adverbs ending in –*ei* must have seemed strange to the medieval scribes,

especially when they had the short –*i* on hand. They could have made the substitution of *i*

for *ei* at the time when vowel length in post-Classical times became irrelevant in Greek or

when the –*ei* began to monophthongize. Another possibility besides this would be the

influence of deictic adverbs like οὑτωσί, νυνί, which could have occurred even earlier,

especially taking into account the fact that the deictic –*i* was long.

What is left now is to show the origins of the –*ei* and *ĭ* endings. As for the origin of *t,*

this should be connected with the existence of the adjectives in –*to*-, which are of PIE

date. Now, as we have seen, there are two relevant series of adjectives, one of them being

of the type ἄωρος, ἄσπονδος, i.e. without *t* in their stems, and another one, those

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[250] See above. It may be, however, that in Sophocles one variant was the original one and the other was
simply a metrical variant. The case is similar to ἀβοατί in Pindar, which has the final *i* short, whereas the

suffixed with –*to*-, type ἀνίδρωτος. The –*tei* ending then should be the result of the

resegmentation of the locative of such adjectives: ἀνιδρωτ- εἰ resulted in ἀνιδρω- τεί,

and - τεί was subsequently taken over to form adverbs like ἀμαχητεί. Whether this

happened originally with all adjectives ending in –*os*, including those in –*tos*, or, as Risch

believed, it happened first only to those stems which did not contain *t*, cannot be shown. I

do not think, however, that anything precludes the possibility that the process could have

taken place in both series.

The problem of the oxytonic accent, however, cannot be explained easily. The

general assumption is that the nouns which are accented in the oblique cases on the last

syllables are hysterodynamic[251]; for example, a word like πατήρ, πατρός enters this

category because the accent shifts onto the ending during the inflection. But the situation

with the thematic declension cannot be reconstructed easily. Beekes[252] believes that the

thematic declension has its origin in an ergative system and that it was based on a

hysterodynamic declension. In his view, the nominative of the thematic declension has its

ending in –*s* as the ergative ending of the hysterodynamic inflection. The ergative itself

would have originated in a hysterodynamic genitive-ablative in -*os*[253].

There remains, then, the problem of the –*ei* ending, which is unusual for the *o*-stems,

because one would expect –*oi*[254], not –*ei* in the locative. Beekes does not believe that the

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Homeric ἀνουτητί, which is similar in its formation, has the *i* long.

[251] Beekes, R.S.P., *The Origins of the Indo-European Nominal Inflection*, Innsbruck 1985, p. 1sqq and 126sqq.

[252] Beekes, ibidem.

[253] This is identical to the ending of the consonantal stems; the ablative marks usually the agent, so that it makes sense to consider it as the ergative.

[254] Cf. the locative Ἰσθμοῖ or οἴκοι.

–*ei* ending was the original one for the thematic stems; his assumption is that this ending was imported from the pronominal stems, which still remain in Greek in some adverbs: ἐκεῖ, πεῖ (Doric for "where"), τουτεῖ (Doric for "here"), διπλεῖ (Doric for "twice").

Although not impossible, the scenario above seems to me to be very unlikely. The reason for this is that it is hard to see what the analogical mechanism was by which the pronominal ending was imported to the locative of the thematic stems. On the other hand, the accent continues to pose problems, since the adverbs in question here are oxytonic, whereas the pronominal stems are perispomene.

I suggest[255] here a simpler solution to the problem, one which does not go back as far as some scholars have gone, to a very early stage of PIE. There are well-known stems[256] in –*es* in Greek, which form adverbs like the one analyzed here: ἀτριβής, ἀμελής, ἀφανής, παγγενής, etc. The inflection of these adjectives follows the paradigm of, let's say, ἀληθής, and have in the dative the form ἀληθεῖ[257], ἀφανεῖ, etc. Now, as we can see, the accent in this dative is perispomene and not oxytonic, a problem we faced above. At the same time this is in perfect accord with what we have in the case of the pronouns of the type ἐκεῖ. There is no satisfactory way to get around the nature of the accent. Nevertheless, Brugmann[258] noticed that there is a similarity between the accent of these adverbs and others, which are composed as well; for example, the use

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[255] This does not mean, of course, that I reject the previous solutions *de plano*; I simply propose what I think to be a simpler solution.
[256] We consider here the adjectives from which the adverbs in question are built.
[257] Αληθεῖ<*ἀληθέσι. The perispomene accent is the result of a sequence / \. If the accent had been on the last syllable, then we would have had oxytone directly.
[258] *Kurze vergleichende Grammatik der Indogermanischen Sprachen*, ed. Berlin 1970, p.453, including note.

of ἀσπουδεί instead of ἀσπουδεῖ is similar to the adverbial use of ἐκποδών instead of the original ἐκ ποδῶν or the use of οὐδ- εἰς when the second part of the compound was εἰς. Whatever the nature of this might have been, it is clear that the adverbial use of frozen cases changes the nature of the accent from perispomene to oxytonic.

The word ἀιεί<*ἀιϜέσι provides, for a good reason, a further proof of this, which has been overlooked by scholars, but which offers a clue to the fact that the adverbial use of former nouns makes them oxytonic rather then perispomene. This word, which is believed[259] to be a former locative, is used in Homer with –*ei* as diphthong. As we can see, it presents exactly the same situation we met in the adverbs we are dealing with here: namely the loss of *s* results in the sequence –*ei*, which would have given a perispomene by the Greek rules. The fact, then, that this simple[260] adverb has an oxytonic accent shows that the reason for the change from perispomene to oxytonic needs to be explained not by compounding, but by the nature of the morphological change from nouns to adverbs.

Nevertheless, the problem is more complicated than it seems. This is because it is not clear either where the accent stood on *ἀιϜεσι, or what the origin of the word is. It is usually assumed that *ἀιέσι is the locative of a noun ἀιές<PIE *ay-w-es, which can still be seen in one variant of this adverb: ἀιές[261]. In this case the accent would be ἀιέσι, and we would face the problem with the change into an oxytonic accent. There

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[259] See Chantraine, *Dictionnaire étymologique.*
[260] That is to say, it is not a compounded adverb.
[261] This is Chantraine's main assumption.

are other scholars[262] for whom αἰϝεσι is the result of the inflection (in locative as well)

of a collective feminine noun *aiwōs, which would still be visible in the Greek

αἰῶ<*αιοσα. Αἰεί would then be from *αἰϝεσι, the latter form being the ablaut

form(in the locative) from *aiwōs. The problem lies exactly in this ablaut, because this

feminine collective is a hysterodynamic form and, consequently, had its accent in the

oblique cases on the desinence: nom.*aiwōs, gen. *ayus-és[263]. Unfortunately, the accent

of the locative is not easy to determine in PIE. But I do not think this is the issue here: by

the time the Greek process of the loss of *s* began, the paradigm of αἰϝεσι had probably

been leveled, and the accent would have been on the ε[264]. In this way, the accent which

resulted from the contraction would have been perispomene; consequently, we would

have to admit as we just have that in this case the change in morphological categories

(noun>adverb) led to a change in the nature of the accent[265].

There is one more thing to clarify here: whether we are talking about adverbial use of

the dative or of the locative. As I noted at the beginning, the form of these adverbs and

their distribution within dialects show that they are of Common Greek date. In respect to

what is said above, the *–ei* ending would be the result of the loss of intervocalic *–s-*,

which is of Proto-Greek age, and whose traces are still felt in Mycenaean[266]. It is well-

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[262] Schmidt Johannes, KZ38/1905, "Zur Geschichte der Langdiphthonge im Griechischen", p.48, and *Die Pluralbildungen der indogermanischen Neutra*, Weimar 1889, reprinted 1980 NY, p.142sqq.

[263] In Sanscrit we have *áyus, áyusas*, which is the result of leveling; the *ā* most likely reflects "Brugmann's law" (*o>ā/_RV).

[264] A similar process took place with *–ōs* nouns: αἰδώς has the dative αἰδοῖ< *αἰδόσι, where the perispomene hints to the fact that the accent was originally paroxytonic.

[265] In fact, adjectives like ἀβλαβής, ἀτριβής, etc. still have perispomene on the ending in the dative. This is because they are, of course, still adjectives.

[266] See Sihler, op.cit. 172. Hamp, *Glotta* 38/1960, p.190sqq believes that the *h<s* had already been lost at the time of the tablets, contrary to the "orthodox" view, for example Ruijgh, *Mnemosyne* 45/1992, p.434, which considers that examples like *pa-we-a/pa-we-a₂* show that the ha could be represented either by *a* or

known fact that Homeric Greek still preserves the trace of the loss of s in the s-themes: ει<*-esi- can be found in hiatus, ἑϊ, depending on the metrical necessities[267], which means that the poets had in their repertoires formulas from an older time, when the effect of the loss of *s* could still be felt. On the other hand, a word like ἀνιδρωτεί, as seen above, has its last syllable as the first one of a foot, so that it could never be scanned in hiatus. Such cases, in which the diphthong is the first syllable of the foot, occur only seldom[268]. There are also numerous cases where one can scan either the diphthong or the hiatus: ἐν Ἀργεϊ νάσθη, ἕλκεϊ λυγρῷ[269], etc. These facts show that there was a free variation between forms in diphthong and forms in hiatus and that our adverbs were scanned sometimes as having diphthongs.

The question remains whether our adverbs could have originated either in frozen datives or in locatives. I think that there is a greater chance that they originated in the dative because the loss of the *s* seems to be closer in time to a period when the locative had already disappeared from the paradigm, but I do not think that this can be proved conclusively.

From these stems the –*ei* ending spread to other adverbs: the –*ei* ending became the marker of the instrumental of the privative type. Ατριβής- ἀτριβεί became the basis for ἀνίδρωτος- ἀνιδρωτεί and from here, by resegmentation, it could spread to adverbs like ἐγρηγορτεί.

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a₂. Hamp's argument goes in the opposite direction, considering that precisely the confusion between signs shows that the *h* has already been lost by this time.

[267] See for a synopsis of this phenomenon, Chantraine, *Grammaire homerique*, p.48sqq.

[268] See Chantraine, ibidem.

[269] The –*ei* is in the fifth foot; Ξ119, Ο393.

The only thing then, which remains to be clarified, is the origin of *ĭ*. Once we have

dismissed the interpretation that this ending might be a frozen accusative neuter, there are

not many possible solutions left. One of them has been already given by Schulze[270] and

consists of seeing this ending as the locative of a consonantal stem[271]. Adverbs like

αὐτοχειρί, αὐτομηνί, παμπαιδί, αὐτοποδί, which could very well be instrumental

datives[272], might be at the origin of the *ĭ* adverbs. The way this ending got mixed in this

case with the *–ei* ending does not seem clear to me. It may be that the above-mentioned

adverbs originally ended in the "normal"[273] *–ei*. The fact that the second part of these

compounds was a consonantal stem, which itself was about to change the original dative

ending in *–ei* to the *–i* taken from the locative might have influenced the adverbs to

change to the *–i* ending as well. The reason, then, why we can see variation in this

adverbial ending and not in the case of the dative itself might be due to the fact that the

adverbs were not within a paradigm in the way the nouns are, so that they were able to

get their endings from both the *–es* stems and from the consonantal stems.

The confusion between *–ei* and *–ĭ* in these adverbs might be also due to the general

confusion caused by the fusion between the locative and the dative, between the

–ei dative ending and the *–ĭ* locative ending. This confusion can still be seen in

Mycenaean[274], where the writing with e for the dative suggests the older form of the

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[270] See above, note 54. Nevertheless, he considers them to be the result of *t*-stems locatives. This runs again against our argument about the fact that the *t*-stems were very rare in PIE as far as we know.
[271] Schulze speaks only in general and he does not provide us with any examples.
[272] Again I do not exclude the locative as the origin of these adverbs. For example, αὐτόχειρ is used as an adjective in Soph.Ant 172, πλήγεντες αὐτόχειρι σὺν μιάσματι, with the accent proparoxytonic, which suggests that the adverb might be originally the locative.
[273] Namely, analogical.
[274] See a good discussion in Hajnal, Ivo, p. 85sqq. He also does not exclude that the *–ei* ending in the locative was taken from the *–ēs* stems.

dative –*ei*[275]. In this way, the loss of the locative and its merger with the dative of the consonantal stems might have worked together towards the general confusion between –*ei* and –*i* and can still be seen in the ending of the adverbs that have been analyzed here.

   We have now reached the end of our discussion of the adverbs in –*ei*, -*ĭ* and –*ī*. Recall that we started by trying to show that the adverb ἀνιδρωτεί does not have its origin in a word which is a theme in *t*. The discussion showed, therefore, that the *t* in this adverb has a completely different origin from the *t* we will find later, in post-Homeric times, in the paradigm of the word ἱδρώς. One might wonder further whether it was not the case that the insertion of *t* in the paradigm of words like ἱδρώς was caused by the existence of such adverbs and their corresponding adjectives in –*tos*. But this too is speculative, of course. Nevertheless, what still stands as an unresolved problem is the origin of this *t*-insertion in the nouns we are dealing with here.

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[275] See, for example, Ruijgh, *'Etudes du grec mycénien,* Amsterdam 1967, p.85.

CHAPTER 4

THE PERFECT PARTICIPLE ACTIVE

One of the most problematic issues regarding the *t* stems in Greek is the perfect active participle, the masculine and neuter forms, which display in all roots a theme ending in a dental *t* in the oblique cases, "intrusively", since the PIE form of the suffix had no –*t-.

Originally, the Perfect Participle Active was formed in Greek with the suffix -*wos*-, which shows a PIE ablaut variation –*wos*-/ -*us*- between masculine and feminine. An example which illustrates this situation is the participle of the verb "to know", PIE *we/oid- εἰδώς< *weidϝos/ἰδυῖα<*widusyə$_2$. We remark here that the original ablaut variation takes place both in the stem and in the suffix, which can still be seen in Sanskrit and Greek. Nevertheless, Sanskrit as shown below does not display the same pattern as Greek. Here are the Greek and the Sanskrit paradigms[276] of the same word for masculine and neuter:

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[276] The *m* in the Sanskrit paradigm is analogical. The large majority of cases of final *n* in Sanskrit are for original *ns*, e.g. the accusative plural *devān* becomes *devānça* before the enclitic –*ca*, which is the result of the preservation of the original ending of the PIE accusative plural in –*ns*, cf. Gk. θεάς, Lat. *deas*. From here the *m* extended to the places where it didn't belong originally, as in the case of the participial paradigm. The steps would then be the following: *vidvās>*vidvāns>vidvān;* the accusative *vidvānsam* would be then the normal development from the second stage of the above process.

Greek:

	M and F sg.	Neuter sg.	M and F pl.	Neuter pl.
N.	εἰδώς	εἰδός	εἰδότες	εἰδότα
G.	εἰδότος	εἰδότος	εἰδότων	εἰδότων
D.	εἰδότι	εἰδότι	εἰδόσι	εἰδόσι
A.	εἰδότα	εἰδός	εἰδότες	εἰδότα

Sanskrit:

	Singular		Dual		Plural	
	m.	n.	m.	n.	m.	n.
N.	*vidvān*	*vidvat*	*vidvāṁsau*	*viduṣī*	*vidvāṁsas*	*vidvāṁsi*
A.	*vidvāṁsam*	*vidvat*	*vidvāṁsau*	*viduṣī*	*vidusas*	*vidvāṁsi*
V.	*vidvan*	*vidvat*	*vidvāṁsau*	*viduṣī*	*vidvāṁsas*	*vidvaṁsi*

	Singular	Dual	Plural
I.	*viduṣā*		*vidvadbhis*
D.	*viduṣe*	*vidvadbhyām*	*vidvadbhyas*
Abl.	*viduṣas*		*vidvadbhyas*
G.	*viduṣas*	*viduṣos*	*viduṣām*
L.	*viduṣi*		*vidvatsu*

The suffix *–wos-* in Greek seems to alternate with a suffix *–wot-* in the masculine

and neuter, in the weak cases (εἰδώς, εἰδότος, etc.). The feminine clearly did not have

such a suffix, because a pre-form *widutya in the weak cases would have given –σσα

or -ττα in all Greek dialects, which does not happen. Therefore the issue of *t* revolves

around masculine and neuter stems.

We can see from the above paradigm that there is no single case-form where

Greek and Sanskrit match up in having the same form of the participial case. Sanskrit,

unlike Greek, does not have *t* in the masculine paradigm, but it has it only in the dual and

plural instr.-dat.-abl, where Greek does not have it[277]. Sanskrit uses the *s* suffix in the

dual gen.-loc, whereas Greek uses *t* in the corresponding dual gen.-loc. Finally, in Greek

it cannot be shown that -όσι, the ending for dative plural, comes from *–ot-si,* rather than

from *–os-si*.

The considerations above make questionable the assumption of a *t* in this category

that is of PIE date. Szemerényi argued more than thirty years ago[278] that all the instances

in all PIE languages where there is a *t*-stem are the result of internal developments within

each language and not a PIE process. His main argument against positing a *t* that

developed within PIE comes from the fact that Iranian languages don't display the same

pattern as their Indic cognates. In contrast to Sanskrit *vidvadbhis*, *vidvatsu*, Avestan has

viδūžbiš and viδušu, with no *t* in the paradigm. In other words, there is no basis for

positing a *t* even for the Indo-Iranian period, which makes the claim of a common origin

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[277] In Greek the dative endings are taken from the locative.
[278] *Studi Micenei ed Egeo-Anatolici* II/1967.

of Sanskrit and Greek *t* very suspect. The *t* in Sanskrit should then be explained on internal grounds. A possibility would be the fact that before endings like *–su*, *–bhis* or *bhyas*/*bhyām*, the *s* of the weak form of the suffix *–us* or even *–vas* would have been obscured by phonological processes. This is shown by the Avestan examples above. Sanskrit then innovated and replaced clusters like *s-s* and *s-bh* with *–ts-* and *–dbh-*, a fact which is visible not only in this case, but also in others: the word for "month" *mās-* has forms with *mād-bh-*; *uṣas-* has a form *uṣad-bhis*[279].

Szemerényi addresses then the most important issue, which also pertains to the topic we deal with here: if *t* is not of PIE date, it must have appeared as a result of a process within Greek itself. Can we trace the emergence of this process?

Szemerényi's conclusion is that we can. His arguments are based entirely on facts from Mycenaean. The evidence we have seems to suggest that in this dialect of Greek the *t* was not present in the paradigm of the Perfect Active Participle. The examples given by Szemerényi are only two, because the feminine forms, as we said above, are not relevant. *Araruwoa*[280] and *tetukowoa*[281] represent the neuter plural forms respectively of the Perfect Active Participle of the verbs ἀραρίσκω and τεύχω. In fact, the two cited forms differ in their endings[282], and the tablets which contain them were found in different places: *araruwoa* was found in a tablet[283] at Knossos; a similar morphological

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[279] See, for example, Whitney, *Sanskrit Grammar*, Delhi 1997, p.145 and 155.
[280] *Araruwoa₂* is an epithet of *pa-ka-na*, which is the Greek word for sword, φάσγανα.
[281] The writing system in Mycenaean spells clusters like the above one , i.e.–CwV-, either CVwV or Cu-wV, where C,V are consonants and vowels respectively. *a₂* represents in Mycenaean aspirated *a*, *ha*, in this case the aspiration being the outcome of *s* from the suffix *wos*.
[282] As noted above, the suffix *–woa* represents [woa], whereas *–woa_a* [woha].
[283] KN Ra 1541, 1545, 1550; see Anna Morpurgo, *Mycenaeae Graecitatis Lexicon*, Rome, 1963.

form, *tetukowoa*, appears in a tablet at Knossos[284], but *tetukowoa$_2$* is found only at

Pylos[285], presumably the older form, in that it still retains[286] the intervocalic *h*

representing *s. These forms correspond to the Homeric ἀρηρότα, which has *t* in its

paradigm, and to an unattested *τετευχϜότα, from τετευχώς[287], already present in

Homer. In addition to these participles, Szemerényi adds the proper noun *widiwoijo*, to be

interpreted as *Widwohios*[288], which is derived from *widwos-* and another participle,

keketuwo, to be interpreted as *kekethwohes*, whose meaning is not clear, but which is

believed to derive from κηθεῖν "help", itself a gloss met only in Hesychius[289]. Contrary

to what Szemerényi believes, I think that *widwohios* is not very relevant, precisely

because it is a name[290]; consequently, its formation could go back to a time before the

t-insertion generally affected the participial paradigm. The name, therefore, could have

been used in the older shape even after the *t* was inserted into the paradigm. There are no

other instances of Perfect Active Participles in Mycenaean texts. Szemerényi's argument

is that the *t* entered the paradigm when the change of *s* to *h* would have obscured[291] the

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[284] KN Ld 871, ibidem as above.
[285] PY Sa682, ibidem as above.
[286] What is interesting here is that A. Evans, who discovered the tablets at Knossos, dated them before the ones discovered by C. Blegen at Pylos. In his view, the tablets at Knossos are from 1400 B.C., whereas the ones in Pylos are later, towards 1200 B.C. L.R. Palmer is of another opinion and considers the tablets from Knossos to date from 1150 B.C. It seems then the participles we analyze here support Palmer's view. One way or another, what it is crucial for our discussion is not this dating, but the fact that these forms don't show the "normal" participial *t* in their paradigm. For a discussion of the chronology of these tablets see C.J. Ruijgh, *Études sur la grammaire et le vocabulaire du grec mycénien*, p.21, Amsterdam, 1967.
[287] This form is different in its ablaut from the Mycenaean one. This fact could lead to another interpretation of facts; see below, where several hypotheses will be taken into account.
[288] See also Szemerenyi, op.cit. p. 22.
[289] See Liddell-Scott.
[290] A patronymic adjective.
[291] Szemerenyi does not give an explanation for the fact that there are, in fact, paradigms which are "obscure", for example the Attic κρέας, κρέως, κρέα, etc. The fact that this paradigm was "regularized" only later to κρέας, κρέατος, etc. (in Attic only!) shows that an " irregular" paradigm existed beforehand. By "irregular" I also mean that the desinences might have become obscure.

paradigm. In Attic[292], for example, the paradigm for εἰδώς would have been become to the following:

Masc.sg. *εἰδώς/ *εἰδω<*εἰδοα/ *εἰδους<*εἰδοος/ *εἰδοι

pl. *εἰδους< *εἰδοες/*εἰδων< *εἰδοων/ *εἰδοσι

This was, in short, Szemerényi's demonstration that the *t*-insertion into the paradigm of the Perfect Active Participle is of post-Mycenaean date. Some questions should be raised, though. One of them concerns the fact that the entrance of *t* into the paradigm nonetheless respected the vowel alternation in the suffix, namely long vowel in the nominative and short vowel elsewhere. The cases we have with *t* entering the paradigms of *s*- stem nouns (χρώς, ἱδρώς, ἐρως, etc.) show something else, namely that the nominative had a major role in forming the new paradigm[293]. In order to have this we will have to assume that the neuter played a role in the analogy, so that the *t* entered first the neuter paradigm[294].

A second question that could be raised concerns the way the *t* spread in all dialects. This is the toughest question and there is no clear answer for it, because of the problems raised by the distribution of Greek dialects[295] and because Mycenaean itself

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[292] In other dialects *o+o* would have given ου, but with the same result of obscuring the inflection. We also remark how freely Szemerenyi uses the dialects in making use of his arguments. It is obvious, I think, that if we follow his argument the *t* entered the paradigm in a post-Mycenaean period, when the dialects were differentiated, which would make the process very late and, on the other hand, it wouldn't explain how all the dialects got it. See Ruijgh's opinion, below.

[293] Χρώς, χρωτός, etc. has ω generalized through the paradigm, whereas εἰδώς, εἰδότος has the alternation ω/ο in its paradigm for masculine and feminine. Only the neuter has the ο throughout its paradigm.

[294] Unless we want to say that, in the case of the participle, Greek used a different way of forming a new paradigm. Given the nature of analogy this could be, in principle, possible.

[295] Various opinions about this distribution can be found among others in Buck , *The Greek Dialects*, p.8; Porzig, *Sprachgeographische Untersuchungen zu den alten griechischen Dialekten*, IF 61/1954; Risch,

seems not to have been a single dialect[296]. In fact, the claim[297] has been made that all

three major dialects, proto-Ionic, proto-Aeolic and proto-Achean, were already present in

Mycenaean times[298]. In the case of the Perfect Active Participle, the data we have are not

very convincing. Indeed, Szemerényi was right in pointing out the fact that the *t* in the

Greek paradigm cannot be of PIE date and his argument about Mycenaean seems to be

right, although it is based only on two examples[299]. These two examples are both

translatable by "made up", "built", "finished", which means that they have passive

meaning, although they are ostensibly, in form, active participles[300]. This is not

necessarily a problem, since it has been long[301] recognized that the original role of the

perfect was to express the state or the result of the action. In this respect, the perfect

opposes itself to the aorist[302]. A well-known example illustrates this with the perfect

τεθνᾶσιν opposed to the aorist (participle) θανόντες:

Τεθνᾶσιν οἱ θανοντες ("the ones who died are dead"; Euripides, Alcestis

541).

"Die Gliederung der griechischen Dialekten in neuer Sicht", MH 12/55; R. Coleman, "The dialect geography of Ancient Greece", TPS 1963, p.58-126, etc. The literature on the topic is, of course, huge.

[296] See for a discussion Ruijgh, *Etudes du grec mycénien*, Amsterdam 1967, p.38.

[297] Ruijgh, *Scripta Minora*, v. 2, p.228.

[298] More precisely towards the end of Mycenaean era and include proto-Doric. See Ruijgh, ibidem.

[299] Chantraine himself is circumspect when he says that " il est donc acquis jusqu'á nouvel ordre que le grec mycenien ne connait qu'un suffixe sigmatique".

[300] Ruigh, *Etudes du grec mycénien*, p.96, Amsterdam 1967, believes that "la valeur spéciale de *te-tu-ko-wo-a₂* est inconnue", although he agrees that the examples show the perfect active participle as having an intransitive and passive (?) meaning.

[301] Dionysos Thrax, ed. Uhlig, p.53, characterizes it as " το παρακείμενον"; Wackernagel in "Studien zum Griechischen Perfektum", *Kleine Schriften*, Gottingen 1904, brings up lots of examples; see also Chantraine, *Histoire du parfait grec*, passim, Paris 1927

[302] I.e., this is an aspectual opposition.

This value of the perfect is an old one[303]. The participles in our examples may be also very old since they show the achievement of a process, not to mention the fact that they are technical terms and, consequently, could well have been part of Greek for a longer time. They can also be found in Homer[304] with the same meaning: Βοὸς ῥινοῖο τετευχώς "made from the skin of an ox" (m423) or ἐξείης ποτὶ τοῖχον ἀρηρότες "piled close to the wall" (b 342).

We have seen so far how the scanty evidence we have from Mycenaean can lead to the conclusion that Mycenaean didn't have a perfect participle active with a -*wot*-suffix. In Mycenaean itself the use of the perfect in general is very limited, not too surprising a situation given the fact that the tablets contain basically just lists of objects. The other dialects don't display anything else but the theme in *t*. The most interesting fact, however, is what happens in Doric and West Greek dialects. If we were to assume that the participle in Mycenaean didn't have a theme in *t*[305] then we would be forced to admit that what we have beginning with Homeric Greek was the result of a post-Mycenaean development. Since the *t* is present across the board in all Greek dialects in post-Mycenaean times, its origin must be looked for either in the descendant(s) of Mycenaean or in the other major dialects and their precursors. For this purpose it would be interesting to see what these latter dialects have to offer. Unfortunately, we don't have enough data to support a firm conclusion. Nevertheless, in a West Locrian inscription from the beginning of the 5th century, which Buck[306] describes as being written in a pure

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[303] See Chantraine, op. cit., ch.4.
[304] With the difference, of course, that the participles have *t* in Homer.
[305] This would mean, of course, that the theme in *t* coexisted with the theme in *s*.
[306] Buck, *Greek Dialects*, Chicago1928, p.144; the inscription itself is at p.217.

Locrian dialect[307], we meet the term ΦεΦαδηκότα, which is translated as "statute" by Buck, and by *"quae placuerunt"* by Liddell-Scott. This neuter plural form belongs to the verb ἀνδάνω, which means "to please", "to delight" and is already met in Homer as a participial form (masc.acc.sg): τοῖσι δὲ πᾶσιν ἑάδοτα μῦθον ἔειπε ("he said words pleasing everybody": I 173). We can see that the participle in Homer doesn't have the formant *k* yet and it has an indirect complement in πᾶσιν. The Homeric form presents some problems, since in the hexameter formula above the first a in this word is long. The word derives from the PIE root *sweH₂d-, which gave in Greek, in Ionic-Attic, ἡδύς, Doric ἁδύς, Latin *suavis*, Vedic *svādu*, OE *swéte*> English "sweet", OHG *suozi*> NHG *süss*. One explanation for this fact, i.e. the length of the first α, was that it is an Aeolism[308]. Nevertheless, it hard to see how the long vowel α has been preserved as such, without turning into η. Leumann had another explanation for this[309]. According[310] to him the long vowel is due to the Ionic compensatory lengthening which results from the fall of F: *wewadwōs>* wewādōs. The Locrian participle, on the other hand, has the *k* in it and it doesn't have any complement; moreover, it has actually become a noun meaning "the things that have been decided", *quae placuerunt*. Now, this meaning is not confined to Locrian. Homer uses the verb in a similar way in R 647: ἐπεί νύ τοι εὔαδεν οὕτως ("if you decided this way"=*si tibi placuit*). And so does Herodotus in

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[307] A West Greek dialect.
[308] Chantraine, *Grammaire Homerique,* Paris 1958, p.20
[309] *Celtica 3*, 1956.
[310] Another possibility would be, of course, that the scansion was fixed when the *w* was still present.

9.19 when he describes the opinion of a body of people: τοῖσι τὰ ἀμείνω ἐάνδανε.

Now, it is clear that if the word in Locrian were a borrowing of some sort, the borrowing

should have occurred from a dialect which still had the F at the time of the borrowing. It

could be the case with Ionic- Attic, which lost it early, but the Locrian form displays the

form with *k*, which is shown neither by Ionic-Attic nor by any of the other dialects. We

know, on the other hand, that Locris was populated by Aeolians[311] before the Doric

invasion. But Aeolic has a different way of forming the perfect participle active. It uses

the present participle active suffix attached to the perfect stem, so that forms like

κατεληλυθόντος, ἐπεστακόντα, καταβεβάων, λελάθων are regular in Lesbian,

Thessalian or Boiotian[312]. It is not clear, in my opinion, whether Aeolic innovated here at

a time before the introduction of *k* into the paradigm. Examples like βεβάων, Hom.

βεβαώς (L 522) do not prove much, since the Homeric form is the regular one in post-

Homeric times. There is only the example of ἑστηώς[313] in Hesiod, which, in

combination with the example above, ἐπεστασκοντα[314], could show the fact that

Aeolic innovated here after the *k* was introduced into the paradigm. Nevertheless, this is

by no means certain, since there were forms with and without *k* and which were used in

parallel. Such an example is provided by the Homeric δεδαώς and δεδαηκώς[315]. It is

also very hard to say whether the Aeolic innovation has something to do with the

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[311] See Ruijgh, *Scripta Minora*, P.450.
[312] See Buck, p.110 or Bechtel, *Die Griechischen Dialekte*, vol. 1 for Aeolic, Berlin 1963..
[313] Hesiod, Theog. 519. The form is Ionic-Attic because of the η.
[314] In Thessalian, see Bechtel, vol.1, p. 194.
[315] ρ519 and β 61 respectively.

avoidance of hiatus after the loss of *s* and of the subsequent *h*. This is as far as we can go with this analysis. The question which arises then is whether the Locrians could have taken the word from the Aeolians. The answer is a clear no. Bechtel actually noticed very well that this form goes hand in hand with the numerous perfect formations in –ηκα, which are found in Arcadian[316]. We don't know, of course, the relations between Arcadians and Locrians, but this word could have been a specific term for military and political treaties, so that the Locrians could have borrowed it as such from across the Corinthian gulf either directly from the Arcadians or via the Dorians, who, in turn, borrowed it from the Arcadians. Otherwise it would be hard to explain how West Greeks such as Locrians, who are so close in territory to the Aeolians, came to insert the *t* into the paradigm of the perfect participle active if they didn't inherit it from a previous stage of their language or they did not borrow it.

The only other examples[317] of a *t*-stem perfect participle active in West Greek or Doric dialects are in Argolic, βεβλαβότος from the verb βλάπτω, and in Cretan[318], where we have a late inscription from the 3rd century with προστακῶτος[319].

These examples show that the *t* belongs to all dialects. It becomes clearer now that it is hard to justify the distribution range of the *t*-stem perfect participle active unless we go back to a very early stage of the dialects, perhaps at a time when their differentiation was not complete. But this itself is a point of dispute in Greek dialectology. The fact that both West Greek and Doric have the *t* in the participle shows

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[316] Bechtel, *Die Griechischen Dialekte*, vol. 3, p.31.
[317] The examples are all drawn from Bechtel.
[318] Both of them are Doric dialects.
[319] IG XII 3 quoted in Bechtel, vol.3 p. 758.

that the process of its insertion must be old, before the differentiation of these two

dialects. The Mycenaean evidence, on the other hand, shows that in this dialect the *t* was

not present. This means that its closely related[320] dialects, which include, at least, the

Arcadian and the Cypriot[321], developed it in one way or another. On the other hand, both

West Greek and Doric seem to have had it, which makes the picture very complicated.

Szemerenyi leaves the problem unsettled and he doesn't seem to be concerned about it,

nor is he concerned about the *t* in West Greek and Doric dialects.

The general picture from above could lead to several hypotheses:

a) the *t* developed very late in Mycenaean and then spread through contact to

West Greek and Doric[322], on one hand, and then to Ionic-Attic, whatever the position of

this dialect is in respect to Mycenaean.

b) the *t* had not developed in Mycenaean, but it developed in West Greek and/or

Doric and then spread through contact in Mycenaean and Ionic-Attic.

c) Mycenaean never had *t* in the participial paradigm, but its subsequent dialects,

Arcadian and Cyprian, got it at the time of their unity through contact with other dialects.

d) the Homeric form τετευχώς is different in its ablaut[323] from what we find in

Mycenaean; we could then imagine a situation in which the Mycenaean form was a

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[320] The relation between the Arcado-Cypriot dialect and Mycenaean is not very clearly established, although the claim has been made that the former might be the descendant of the latter. See for this Ruijgh, *Ἔtudes du grec micénien*, p.35sqq.

[321] These dialects have the t in their participles. A good example for this is the Arcadian κατηνθηκότι, from the root ἐλθ- , "to go", with the Arcadian special treatment of the cluster -λθ- as -νθ-; see Bechtel, vol. 1, p.365.

[322] This hypothesis has already been made by Wathelet Paul, *Les traits éoliens dans la langue de l'épopée grecque*, Roma 1970, p.328. Nevertheless, he does not take into account what happens in Doric and West Greek.

[323] The argument has been made that the zero grade is older than the full grade; see Sihler, p.618sqq; Leumann, M., *Celtica* III, Dublin 1956, p.241sqq.

specialized adjective derived from the "older" *t*-less participle, but not a perfect participle *per se*. Similar situations we can find in other languages, for example in Romance, where Romanian has the adjective *mort*, "dead", which originated in the Latin perfect passive participle of the verb *morior, iri, mortuus sum* and is used nowadays only as an adjective meaning "dead"; in the place of the former participle Romanian created another (analogical) perfect passive participle, which is seen today in *murit, (am murit = "I have died")*. This is similar to what happened in English, where "dead" originates in a former past participle, which has been replaced by the new one, "died". Other examples are those participles in Latin which have been replaced by the newer ones belonging to the factitive verbs: *meritum* was a former participle of *mereor, merere, merui, meritus sum* and ended up being used as a noun, both in Latin and in Romance languages, whereas in Romance new participles were created[324]. Romanian has the same situation with the participle *facut* from the verb *a face*, Lat. *facio, ere, feci, factum* = "to make". The old Latin participle became specialized as a noun, *fapt(a)*, which means "deed"[325].

The considerations from above could also apply[326] to *araruwoa*, which has a similar meaning with *tetukowoa*. Thus, τετυχ Fóα φάσγανα could mean something like "finished/well-made swords". In this way, the perfect with *t* could have appeared in Common Greek and all the dialects would have had it from the beginning.

Now, it seems to me that a) and b) are very hard to maintain, because the spreading of *t* would have had to occur in many dialects simultaneously. On the other

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[324] In French *mérite* = "merit"<Lat. *meritum,* but the participle *mérité* is a new one, belonging to the paradigm of the former factitive verb *meritare*>Fr.*mériter*.
[325] Already present in Latin with this meaning: *factum* means "deed".
[326] The other forms mentioned in this chapter are very obscure and one cannot be sure what they represent. *Widiwoijo* is a name and, as I have noted above, could represent the form before the *t*-insertion.

hand, c), although it seems the most plausible, leaves unanswered a crucial question: how is it possible for such different dialects as Ionic-Attic, on one hand, and West Greek and Doric, on the other, to have the *t* in the participial paradigm and for Achaean, i.e. the ancestor of the Arcado-Cypriot dialect, not to have it? The answer perhaps lies in the similarity between the above dialects in respect to other aspects of the verbal paradigm, namely when it comes to the endings for the middle voice: Mycenaean presents endings of the type –toi[327], whereas the other dialects make use of the innovation -ται[328].

The conclusion which can be drawn from (c) is that, despite the fact that Mycenaean offered only two good and reliable examples for the non-existence of a *t*-stem in the paradigm of the perfect participle active, there is a chance that the *t* was not present in this dialect.

The last hypothesis (d) is, therefore, the most attractive, because it makes the *t*-insertion a process which would still have taken place in Common Greek. The Mycenaean forms then would be only specialized adjectives derived of course from the "older" *t*-less participles.

The only thing, however, we can be certain about is that, although the conditions which led to the appearance of the *t*-stems in Mycenaean are obscure, this development must be seen as a Greek fact, not a PIE one.

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[327] The Arcado-Cypriot dialect also has this feature.
[328] See for a discussion of this fact Ruijgh, op.cit, p. 36.

CHAPTER 5

SUMMARY AND CONCLUSIONS

The present work tries to analyze when, where and how some of the nominal stems in Greek became *t*-stems. For this purpose, the dissertation splits into four parts.

The first part is introductory and establishes the goal of the research and the methodology. The *t*-stems are divided according to whether they are or are not in allomorphic variation with their corresponding *t*-less stems. The research is not concerned with those *t*-stems which do not display this kind of allomorphic variation. This is because these latter stems do not offer the possibility to see how they coexisted with other forms. They display only one paradigm, showing no fluctuation between different allomorphs. On the other hand, the words with "intrusive" *t* which have allomorphic variation show how different allomorphs coexisted with each other and how the *t*-stems eventually won over.

An important part of this chapter is dedicated to Benveniste's theory, according to which in some of these *t*-stems, namely the neuter nouns ending in –*as* in the nominative singular, the *t* belongs to the prehistory of Greek and is the result of a change in the declension type from one which had –*ar*[329] in the nominative singular-type ἧπαρ,

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[329] Stems with *r/n* alternation.

ἥπατος- to one which had –*as* in the nominative singular and is originally represented by only two words: κέρας and κρέας. The dissertation tries to see whether the data we have can provide us with an answer about the validity of this theory. The results of the research show that the original *s*-stems (κέρας, κρέας) behave pretty much in the same way as the *t*-stems derived from the heteroclitic declension. In other words, there is practically no difference in respect to 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 γέρας and that of κρέας. They both show that the *s*-stem was initially predominant in historical Greek and that the *t*-stem won eventually over in Attic. Therefore we cannot know, by simply looking at the data, which of these words was a *t*-stem resulting from a heteroclitic declension. This fact shows that Benveniste's theory must be regarded with caution. If we assumed this theory to be correct we would have to admit that the allomorphic variation between these stems had existed beginning with the Proto-Greek stage and continuing through Ionic-Attic. We would also have to admit that Attic was the only dialect that retained this archaism, while preserving the paradigm of a predominant *s*-stem for a certain period of time. In this view, both the Ionic and Aeolic dialects gave up the *t*-stems, preserving only the paradigm of the *s*-stem. These are the reasons why Benveniste's scenario, although not impossible, is less likely to have happened.

Another view of the facts is the one which considers that not all the words analyzed here belonged to the heteroclitic declension. According to this view, with the

exception, perhaps, of τέρας, these neuters in –*as* may have been *s*-stems from the beginning. The *t*, then, which occurs in Attic would be an innovation within this dialect. The table below shows when this innovative "intrusion" occurred for the first time in the literary and epigraphical sources that we have.

The most important fact that results from this research is that there was not an instantaneous switch from a *t*-less stem to a *t*-ful one. These allomorphs continue to exist throughout the centuries and it is only in the 2nd 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 them.

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 the *t* entered (or won over, in Benveniste's view) the nominal paradigms in a "diffusionary" way, from lexical item to lexical item. Thus, some of these nouns, like τέρας, seem to have decided in favor of a *t*-paradigm earlier than the others.

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

The results are synthesized in the synoptic table below. The table shows the dialect in which the *t* first entered the paradigms and also what happened to the other forms, the *t*-less ones.

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t in/ Words	Ionic	Attic	Aeolic	Doric	T appeared in
Ἅλας		Bolus Med. (Aristotle?)			Attic D.sg. ἅλατι 2nd B.C.
Ἄρτεμις	t-stem	t-stem		t-stem	Mycenaean; Common Greek
Γέλως	Herodotus	Tragic authors; t-less continues to exist	Thematic Γέλος		Attic or Ionic-Attic G.sg. Γέλωτος 5th B.C.
Γέρας	t-less	t-less, Herodianus			Attic G.sg. Γέρατος 2nd A.D.
Γῆρας	t-less	t-less, Isocrate, Herodianus			Attic D.sg. Γήρατι 4th A.D.
Γόνυ	Homer, Homeric Hymns, Tyrtaeus, Herodotus	Tragic authors	Only t-less forms, uncontracted		Ionic-Attic
Δέος	t in Hecataeus	t in Sophocles			Ionic-Attic or earlier δέατος, δέατα 5th B.C.
Δέπας		Herodianus			Attic G.sg. Δέπατος 2nd A.D.
Δέρας		Herodianus			Attic G.sg. Δέρατος 2nd A.D.
Δόρυ	Homer, Hesiod; t-less forms in	Tragic authors, Xenophon, Thucydides;		t-less in Alcman (?)	Ionic-Attic

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	Homer, Hesiod, Simonides, etc.	*t*-less forms in Tragic authors,Plato		and Pindar, but Ionic length.	
Ἔρως	*t*-less in Homer; t in Theognis	Tragic authors (also *t*-less)	Sappho; *t*-less thematic forms in Sappho and Alcaeus		Ionic-Attic and Aeolic; could be older; G.sg. ἔρωτος 7th B.C.
Ἱδρώς	*t*-less in Homer (Aeolic?); Hesiod(?), Herodotus	Tragic authors, Aristophanes, Plato			Attic or Ionic-Attic Acc.sg. ἱδρῶτα 8th B.C.
Κέρας	Anaxagoras(?) Hecataeus(?)	Inscriptions, Tragic authors, Plato; *t*-less forms continue to exist			Attic N.pl; N.dual κέρατα, κέρατε 5th B.C. (6th?)
Κνέφας	*t*-less only	*t*-less; only in Polybios			Attic G.sg. κνέφατος 2th B.C.
Κρέας	*t*-less in Homer, Theognis, Hecataeus, Herodotus	*t*-less in Tragic authors, Plato, Aristophanes; *t* in inscription (4BC), Phylarchus, Athenaeus, Herodianus			Attic G.sg. κρέατος 4th B.C.
Σέλας	*t*-less	t-less; *t* only late in Conon (1AD)			Attic G.sg. σέλατος 1st A.D.
Σπέος	*t*-less, Xenophan(?)		Xenophan (?)	Xenophan (?)	artificial? Common Greek? σπεά- τεσσι 6th-5th B.C.

Τέρας	*t*-less in Homer (Aeolic?), Herodotus (τέρος); *t* in Herodotus	*t*-derivative in Aristophanes, *t* in Xenophon, Plato	*t*-less in Alcaeus (but τέρος)		Ionic-Attic, could be Common Greek G.sg; N.pl. τέρατος τέρατα 5th B.C.
Φάος Φῶς	*t*-less in Homer, Archilocus, Theognis, Hesiod; φῶς in Anaximander, Anaximene, Theognis, Herodotus	*t*-less in tragic poets, Aristophanes; *t* in tragic poets, Aristophanes, Plato, etc.	Φάος in Alcaeus, Sappho, Pindar(?); Φῶς in Alcman(?).		Attic or Ionic-Attic or older (Alcman) D.sg. φωτί 6th B.C.
Χάρις	*t*-less form only χάριν; *t* in Homer (Graces), Hesiod, Herodotus	Tragic authors		Pindar	Ionic-Attic or older (Homer, Hesiod)
Χρώς	*t*-less form in Homer, Theognis, Euripides, Pindar, Herodotus, Archilocus; *t* in Homer(2), Hesiod, Pindar(?)	*t*-less in tragic authors, Aristophanes; *t* in tragic authors	*t*-less in Sappho, Pindar(?) *t*-form in Pindar(?)	*t* in Pindar(?)	Homer, Hesiod

The third chapter of the research deals with the adverbs in –*ti*, of the type

ἀνιδρωτί, ἀμαχεί, etc. Some of these adverbs show a *t* in their ending, which was

seen by some scholars as belonging to former t-stems, as it might be the case with ἱδρώς

and ἀνιδρωτί. These adverbs are also difficult to analyze because they present a variation in their ending between -ῐ̆, -ῑ̄ and –ei. The study shows that it is more likely that the –ῑ̄ ending is a matter of scribal error and that the other two are the only ones which are genuine. On the other hand, the confusion, which can be found in the manuscripts between these two latter endings, is shown to be the result of the confusion between the –ei dative ending derived from adjectives in - ής and the –ῐ̆ ending of consonantal stems of the type αὐτόχειρ.

The most important conclusion, however, of this chapter is that the *t* in adverbs like ἀνιδρωτεί is not due to the fact that there was an original *t* in the stem of the noun ἱδρώς, but the result of an analogical process, by which the dative (locative) ending from the adjectives in –ής extended to adjectives in –*to*- such as ἀνίδρωτος when they became adverbialized.

The last chapter of the dissertation deals with the perfect active participle in Greek. This is because, despite the fact that all dialects in historical Greek show a *t* in the paradigms of this participle, Mycenaean demonstrates through 2-3 tokens that its participle did not have a *t* in its paradigm. This strange situation is resolved through two hypotheses. The first one is that the *t* was imported into Greek by the Doric and West Greek populations, which collided with the Mycenaean one. The other one is that the Mycenaean participles in question are only adjectives derived from former *t*-less participles. In this way it is possible to view the perfect active participle as still having its *t* in Common Greek or Proto-Greek, whereas such adjectives as the Mycenaean ones would represent "frozen" former *t*-less participles.

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