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From *s*-Stems to -εσι-Compounds: Morphosemantic Constraints on Analogical Change in Ancient Greek*

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In Ancient Greek, verbal first compound members in -εσι- derive regularly from verbs with aorists in -εσ- (e.g., ἐτέλεσα ⇒ τελεσι-). From this context, the sequence -εσι- is reanalyzed as a linking element and extended to verbs without an aorist in -εσ- (e.g., πηγεσι- vs. aor. ἔπηξα). Previous analyses of this analogical extension have proved empirically inadequate. I reconstruct a process, active in Homeric Greek and parallel to the deverbative formation of verbal second members in -ής (Meissner 2006:186–96), which produces verbal first members in -εσι- by analogy with the compositional forms of *s*-stems (-τειχής : τειχεσι- :: -τελής : τελεσι-). The process starts with denominative verbs from neuter *s*-stems, which also produce second members in -ής. As these are reanalyzed as deverbative, a verbal first member in -εσι- is also created and specialized for transitive meanings. The new derivational rule spreads according to strictly defined patterns of proportional analogy to verbs without a connection to *s*-stems, but with verbal second members in -ής. Once the new subclass of τερψίμβροτος compounds in -εσι- is created, it patterns with the class of φερέουκος compounds in -ε- and provides the -ε- verbal first members with an -εσι- counterpart. While the analogical process ceases to be productive already in Homer, compounds in -εσι- remain in the lexicon of poetry and onomastics as archaisms.

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1 Introduction

Ancient Greek compounds with a verbal first member in *-εσι-* are a subclass of the so-called *τερψίμβροτος* type. While the historical development of this type is debated (Dunkel 1992; Schindler 1997; Tribulato 2015:159–209; Jamison 2024),¹ *τερψίμβροτος* compounds can be described as a compound type characterized by a verbal first member ending in a sequence *-σι-*, which distinguishes this class from the other class of Ancient Greek verb-initial compounds, the *φερύοικος* class, typically based on verbal stems without *-σι-*. As exemplified by the namesake of the category, *τερψίμβροτος* ‘delighting mortals’, the verbal first member (*τερψ-*) is formally identical to the corresponding sigmatic aorist active stem (*ἔ-τερψ-α* ‘I delighted’). As a consequence of this phonological identity, verbal first members are synchronically analyzable as a sigmatic aorist stem with a linking vowel *-ι-*.² In line with this, we expect verbal first members in *-εσ-* followed by linking vowel *-ι-* to be based on aorist formations in *-εσ-*. These aorists descend either from radical stems ending in **-h₁*, as in (1) or from denominatives from neuter *s*-stems as in (2):

(1) *ὀλε-* (< **h₃elh₁-³*) ⇒ aor. *ὄλεσ-α* (pres. *ὄλλυμι* ‘I destroy’)

(2) *τελεσ-* (< **telh₂-es/os-⁴*) ⇒ aor. *ἔτελεσ(-σ)-α* (pres. *τελέω* ‘I fulfill’)

From these contexts the sequence *-εσι-* is reanalyzed as a linking element⁵ and extended to verbs without an aorist in *-εσ-*, but with either a different sigmatic formation, as in (3), or a non-sigmatic one as in (4):

1 From a diachronic point of view, first members in *-σι-* are normally described as the assimilated development of **-ti-* stems employed as first compound members in compounds of the *dātivāra*-type (Schwyzer 1939:441; Schindler 1997:539). While first members in *-ti-* are attested in Ancient Greek, even if barely (e.g., Hom. *βωτιάνετρα*, Myc. *(ne-ti-ja-no)* *Nestianōr*, recent work by Jamison (2024) calls for skepticism around the comparative data for the *dātivāra*-type in Sanskrit. Overall, the development of this class of verb-initial compounds from **-ti-* stems remains problematic at least with regard to the semantic development from noun-noun compounds to verb-noun compounds (Schindler 2022:333), and the mismatches in ablaut grades (Vine 2004) and in the attestation period of the putatively corresponding *-σις* abstracts (Tribulato 2015:174–6).

2 Less frequently, also *-ε-* or *-ο-* (Tribulato 2015:170–2).

3 Cf. Beekes 2010:1069–70; Rix 2001:298.

4 Cf. Beekes 2010:1463–4; Rix 2001:622–3.

5 I adopt here the definition in Szczepaniak 2020: “The term *linking elements* (LE) (or linkers) is used to describe sound material or graphemes with or without a phonetic correspondence appearing at the boundary between two parts of a word-formation product.” The concept of *linking*

- (3) πηγεσι- vs. aor. ἔπηξα (pres. πήγνυμι ‘I fix’)
 (4) ἀλφεσι- vs. aor. ἤλφον (pres. ἀλφάνω ‘I yield’)

Given the high degree of morphological variation that is normally found in the Ancient Greek compounding system, the distribution of -εσι- has never been a concern of previous scholarship. I aim to address this gap in the literature, with particular reference to Homeric and Archaic Greek, by proposing that the allomorph -εσι- develops on the basis of an association with neuter *s*-stems and their derived second compound members in -ής and becomes a complementary alternative both in terms of morphology (-εσι- vs. -ής) and in terms of semantics (transitive vs. intransitive). This development creates a derivational pattern that spreads to verbs that do not derive from an *s*-stem, through an analogical process that is constrained by well-defined proportions rooted in the morphological and semantic features of the elements involved.

In what follows, I present my dataset together with a review of the existing analysis offered in Tribulato 2015 and its shortcomings (§2). In the same section, I divide my dataset into four groups of verbs depending on their morphosemantic features. In §3 I trace the development of the -εσι- class starting with the -εσι- first members with -εσ- aorists: I show that the connection with coradical neuter *s*-stems and second members in -ής creates a derivational pattern where -εσι- (with transitive semantics) is in complementary distribution with -ής (with intransitive semantics). Then I reconstruct analogical processes with proportional constraints that explain the creation of new analogical -εσι- verbal first members. This explanation considers morphosemantic (§4), purely semantic (§5), and metrical aspects and includes notes on the historical development of the -εσι- morpheme (§6). I conclude in §7.

2 The dataset and previous analysis

Tribulato (2015:361–424) lists twenty-six verbs that have compounds with -εσι- first members. In order to reconstruct the origin of this allomorph, I believe the dataset has to be restricted to the oldest attestations of -εσι-, which have a clear chronological cut: more than half of them (fourteen) are attested early—mostly in Homer, Hesiod, and the *Homeric Hymns* (ten; I refer to these as Homeric Greek), some in the lyric poets (four; I refer to these as Archaic Greek)—while the remaining twelve only appear for the first time in the Classical period (six; all PNs) or

element is not easily defined, cf. Szczepaniak 2020 for a review of this morphological issue and a typological overview of linking strategies.

later (six; mostly in the Hellenistic period).⁶ I base my explanation of the development of -εσι- first members on the earlier subset of attestations.

Before examining the data, some observations are in order as to why a new explanation is needed at all. According to the previous analyses culminating in Tribulato 2015 (171; cf. also Schwyzler 1939:443–4; Risch 1974:192), -εσι- is expected in first verbal members based on aorists in -εσ-, where -εσ- is part of the verbal stem and -ι- is a linking element (Tribulato 2015:169). From that context, -εσι- is “exported” and used as a compound marker in two different cases: (i) with asigmatic aorists and/or (ii) for metrical purposes. These two proposed explanations are not investigated further by Tribulato, but a closer look at the data reveals that they are insufficient to account for the presence or absence of -εσι- in a principled way.

First, the analysis sketched by Tribulato both undergenerates and overgenerates. On the one hand, it undergenerates because it does not predict the presence of -εσι- with sigmatic stems. If -εσι- is only employed as a linking element for asigmatic aorist stems, then we do not predict it to appear with sigmatic aorist stems. This prediction is not borne out for Homeric Greek as shown in (5), where -εσι- is applied to verbs that would have had a sigmatic aorist stem available for the creation of a verb-initial compound.

- (5) a. πῆγνυμι ‘I fix’ Hom. aor. ἔπηξα ⇒ Hom. *πηξι-, πηγεσι-
 b. ἄρχω ‘I begin’ Hom. aor. ἤρξα ⇒ Hom. *ἄρξι-, ἀρχεσι-⁷

On the other hand, it overgenerates because it always predicts the presence of -εσι- for asigmatic aorist stems. If -εσι- is employed as a linking element for asigmatic aorist stems, then we predict it to appear with all asigmatic aorist stems. The forms in (6) show that this prediction is also incorrect for Homeric Greek, because there exist verbs with asigmatic aorists that do not employ the -εσι- extension to form a verb-initial compound.

- (6) a. δάκνω ‘I await’ Hom. aor. ἔδακον ⇒ Hom. *δακεσι-, δακε-
 b. ἐγείρω ‘I wake up’ Hom. aor. ἔγρετο ⇒ Hom. *ἐγρεσι-, ἐγρε-⁸

6 I adopt the editions and abbreviations of the *Thesaurus Linguae Graecae* online (<https://stephanus.tlg.uci.edu/>). I use the abbreviation PN for personal name.

7 *πηξι- and *ἄρξι- are both attested for the first time in the 2nd cent. CE in the grammarian Phrynicus and the rhetor Polyaeus, respectively.

8 ἐγρεσι- is first attested in Manetho (3rd cent. BCE).

Therefore, the correlation between -εσι- and asigmatic aorist stems cannot be the source of the analogical process at play here. As I show in §5, thematic aorists do play a role in the process, but they are not the pivotal trigger.

As for the second source of analogy, Tribulato proposes that some of these verbal first members in -εσι- are created for metrical convenience. While I recognize the influence of the metrical environment in some cases (§6), I think that the role of meter in shaping these forms warrants re-evaluation. Other metrically equivalent sequences of short vowel followed by -σι- are in principle available to be extracted and analogically applied to other stems, such as -ασι- and -υσι-. Why was -εσι- selected as a metrical repair strategy and not one of the other sequences? Verbal first members in -ασι- are not attested in Homeric Greek, so it is unlikely they could have played any role, but verbal first members in -υσι- appear several times.⁹ In order to explain why -υσι- does not participate in the analogy, our explanation has to go further than metrical convenience only. I argue here that -εσι- was selected because of an existing morphological overlap with *s*-stem first compound members, as I explain below (§3).

In conclusion, I retain Tribulato's (2015) core idea that the spread of -εσι- is an analogical process, where asigmatic aorist stems and meter are relevant elements to the analysis. The analysis itself, however, cannot be limited to the simple notion of analogy. From a methodological perspective, analogy is too powerful a tool and can be used to explain nearly anything, especially if it is only based on the formal resemblance of two elements that do not otherwise participate in any other comparable behavior or usage (cf. Hill 2007). Therefore, I propose an analysis whereby a strictly constrained proportional analogy based on the morphological overlap with *s*-stems reflects the semantic properties of *s*-stem compounds and ultimately leads to the creation of an allomorphic alternative in -εσι-. In order to achieve that, I have divided all the early instances of -εσι- verbal first members into four groups based on their morphological and semantic features:

- Group 1: verbs with -εσ- aorists (§3);
- Group 2: verbs with intransitive verbal second members in -ής (§4);

9 The compounds in question are ἐρυσάρμα 'chariot-drawing' (2× in Hom., 1× in Hes.), ἐρυσίπολις 'protecting cities' (1× in Hom., 2× in *h.Hom.*), τανυσίπτερος 'wing-stretching' (2× in Hom., 2× in *h.Hom.*, 2× in Hes.). Their count is even higher than the non-analogical first members in -εσι-: Ἀρκεσίλαος PN 'who defends his people' (2× in Hom.), φαεσίμβροτος 'who brings light to the mortals' (3× in Hom., 1× Hes.), ὠλεσίκαρπος 'which loses its fruit' (1× in Hom.); a comprehensive list of the -εσι- first members, including all Homeric and Archaic Greek attestations with analogical forms, is given in Table 1 below.

- Group 3: prototypically transitive verbs with thematic aorists (§5);
- Group 4: verbs with an alternative -ε- first member (§6).

Table 1 provides an overview of the forms under analysis, together with their base verb, the author of their first attestation and a number of relevant formations. When a form does not exist (e.g., the aorist of the verb ‘to carry’ based on the stem φερ-) or is not attested in the timeframe I am considering (e.g., -ώλης, first attested in Aeschylus), it is signaled by N/A; when a form is only attested as a PN, it is signaled by the first capitalized letter.

3 Group 1: verbs with -εσ- aorists

As mentioned in the introduction (§1), some verbal first members of compounds in -εσι- derive from aorist formations in -εσ-. These aorists, which must antedate the formation of -εσι- first members, come from radical stems ending in *-h₁ and denominatives from neuter *s*-stems. There is only one example of a radical stem ending in *-h₁ in my dataset:

- (7) ὄλλυμι ‘I destroy’, aor. ὄλεσα ⇒ ὄλεσικάρπος ‘losing its fruit’
(Hom. *Od.* 10.510)

Note that ὄλεσι- in (7) appears to incorporate the augment, even if the synchronic word formation rule for a verbal first member of compound does not normally include the augment as shown in (8).

- (8) ὀρνυμι ‘I raise’, aor. ὄρσα ⇒ Ὀρσίλοχος PN ‘inciting ambush’
(Hom. *Il.* 5.542+)

Moreover, while the occurrence of the augment is generally variable in Homer, the aorist of ὄλλυμι, ὄλεσα, is consistently augmented.¹⁰ The presence of the augment in both the aorist and the compound underlines the dependency of ὄλεσι- on the aorist ὄλεσα and points to the neat application of the derivational rule mentioned in §1, whereby verbal first members of compound of the τερψίμβροτος type are synchronically derived from their aorist formation. The augmented ὄλεσι- shows that the synchronic derivation rule is productive in Homer and employed to create new verbal first members of compound with transitive semantics (Tribulato 2015: 114–5), since -καρπ- ‘fruit’ is the object of the verb in ὄλεσικάρπος ‘losing its fruit’.

10 It is relatively safe to exclude that the long element in ὄλεσα is the result of metrical lengthening, since the latter is notated with the digraph ⟨ου⟩ as in οὐλόμενος (Hom. *Il.* 1.2+; cf. Chantraine 1958:8, 98).

Table 1. Verbal first members in -εσι- attested in Homeric and Archaic Greek with relevant parallel forms.

Verb	First member		First attestation	Aorist	Neuter <i>s</i> -stem	Second member		Other first member
	First member	Other first member						
Group 1 ἀρκέω 'defend' τελέω 'fulfill' φασαίνω 'shine' ὄλλωμι 'destroy'	ἄρκεσι-	ἄρκεσα	Hom.	ἄρκεσα	ἄρκεος	-αρκίης	N/A	
	τελεσι-	τέλεσσα	Pind.	τέλεσσα	τέλεος	-τελήης	N/A	
	φασασι-	φασαίη	Hom.	(φάε)	φάος	-φασίης	N/A	
	ὄλλεσι-	ὄλλεσα	Hom.	ὄλλεσα	N/A	N/A	N/A	
Group 2 ἄημι 'blow' πήγνυμι 'fix' φέρω 'carry'	ἀεσι-	ἀεσι	Hom.	N/A	N/A	-αίης	N/A	
	πηγεσι-	πηγεσιν	Hom.	ἔπηξα	N/A	-πηγίης, -πηγίης	N/A	
	φερεσ(ι)-	φερεσ(ι)	Hom.	N/A	N/A	-φοροίης, -φεροίης	φεροίης	
Group 3 ἀλφάνω 'yield' λείπω 'leave' τέμνω 'cut'	ἀλφεσι-	ἀλφεσιν	Hom.	ἄλφον	N/A	N/A	N/A	
	λιπεσ(ι)-	λιπεσ(ι)	Stesich.	ἔλιπον	N/A	N/A	λιπο-	
	ταμεισι-	ταμεισιν	Hom.	ἔταμον	N/A	-τομοίης	N/A	
Group 4 ἄγω 'lead' ἀρχω 'begin' ἔλκω 'drag' χαίρω 'rejoice'	ἀγεσι-	ἀγεσιν	Alc.	ἄγαγον	N/A	N/A	ἀγε-	
	ἀρχεσι-	ἀρχεσιν	Stesich.	ἄρξα	N/A	N/A	ἀρχε-	
	ἐλκεσι-	ἐλκεσιν	Hom.	Hom. ἔλκησα Att. ἐλκωσα	N/A	N/A	ἐλκε-	
	Χαιρεσι-	Χαιρεσιν	Ps.-Hes.	Hom. ἐχάρην Att. ἐχαίρησα	N/A	N/A	χαυρε-	

The other first members in *-εσι-* with aorists in *-εσ-* in my dataset are all connected to neuter *s*-stems: *ἀρκεσι-*¹¹ (← *ἄρκος* ‘defense’), *τελεσι-*¹² (← *τέλος* ‘end’), and *φαεσι-*¹³ (← *φάος* ‘light’). From a morphological point of view, these first compound members in *-εσι-* could in principle derive from either the *s*-stem nominals or from the aorist stem of the corresponding denominative verbs, which are *ἀρκέω* ‘defend’, *τελέω* ‘fulfill’, and theoretically **φαέω* (not attested), respectively. Yet while there would not be any difference in their morphology,¹⁴ the underlying syntax and the resulting semantics would be substantially different. As shown in (9a), if the first member in *ἀρκεσι-* is based on the verb *ἀρκέω*, it functions as the morphosyntactic head of the compound and takes the second member *-λαος* as its object; this left-headed structure allows for the translation ‘who defends his people’. Conversely (9b), if *ἀρκεσι-* is based on the noun *ἄρκος*, it is the syntactic argument of the head of the compound, which in this case is the second member *-λαος*; this right-headed structure, instead, leads to the possessive (*bahuvrīhi*) interpretation ‘who has his people as defense’. The same possible analyses also apply to *τελεσι-* in (9c)–(d).

- (9) a. *ἀρκέω* ⇒ *ἀρκεσί-λαος* ‘who defends his people’
 b. *ἄρκος* ⇒ *ἀρκεσί-λαος* ‘who has his people as defense’
 c. *τελέω* ⇒ *τελεσι-κράτης* ‘who fulfills his strength’
 d. *τέλος* ⇒ *τελεσι-κράτης* ‘who has strength as purpose’

11 *Ἀρκεσίλαος* PN ‘who defends his people’ (Hom. *Il.* 2.495+).

12 *Τελεσικράτης* PN ‘who fulfills his strength’ (Pind. *P.* 9.3+), *Τελέσαρχος* PN ‘who fulfills his power’ (Pind. *I.* 8.2), *τελεσσιεπής* ‘which fulfills its words’ (Pind. *Pae.* 52g.2).

13 *φαεσίμβροτος* ‘bringing light to mortals’ (Hom. *Il.* 24.785+).

14 When neuter *s*-stems appear as first compound member, historically, the full grade suffix is expected (Stüber 2002:27), as in *ἐπεσβόλος* ‘throwing words around’ (Hom. *Il.* 2.275) from *ἔπος* ‘word’ (cf. Ved. *támas-* ‘darkness’ ⇒ *tamohán-* ‘darkness killer’). The form *-εσι-* sometimes appears instead of *-εσ-*, and is traditionally explained as the result of the univerbation of a phrase containing a dative plural (e.g., *ὄρεσι τρόφος* >> *ὄρεσίτροφος* ‘reared on the mountains’; Risch 1974:219–20). I argue elsewhere (Migliaretti 2025) that in compounds with a nominal *s*-stem first member, *-εσι-* is an allomorphic alternative to *-εσ-* that appears in phonologically conditioned environments; more specifically, *-εσι-* is required before a sonorant or a cluster, while *-εσ-* is employed elsewhere. Note that this allomorphy only concerns *nominal* first members, while verbal first members regularly employ *-(ε)σι-*. If the allomorph *-εσ-* appeared in the forms discussed here, it would be possible to tell apart nominal and verbal elements. The ambiguity, however, still obtains in these forms because they all present phonological environments that call for the *-εσι-* allomorph, such as a following sonorant (*-λαος*, *-(ϕ)επής*) or a cluster (*-μβροτος*, *-κράτης*).

The case of φαεσι- is more complex, since a verb *φαέω ‘shine’ does not exist, but the *s*-stem noun φάος ‘light’ does. Nonetheless, if we assumed the first member came directly from the *s*-stem φάος ‘light’, we would obtain a compound with unlikely semantics (10b). The semantically correct interpretation must be verbal (10a), as the contextual use of the compound seems to confirm: the form is normally predicated of the sun (e.g., Hom. *Od.* 10.138) and the dawn (e.g., Hom. *Il.* 24.785), which literally bring light to the world.

- (10) a. *φαέω ⇒ φαεσι-μβροτος ‘who gives light to the mortals’
 b. φάος ⇒ φαεσι-μβροτος ??‘who has mortals as/with light’

This semantic preference suggests that despite the morphological identity between nominal *s*-stem first members and verbal first members from -εσ- aorist stems, the preferred interpretation of these -εσι- first members should be verbal. However, in order to accept the interpretation in (10a) without reconstructing an unattested *φαέω, we must look at the issue from another perspective and consider *s*-stem nouns employed as second members of compounds and their inner-Greek development.

When neuter *s*-stems appear as second compound members, they present the suffix -ής, -ές (e.g., εὐτειχής, -ές ‘well-walled’ (Hom. *Il.* 16.57+) based on τεῖχος ‘wall’; cf. Schindler 1975:260; Stüber 2002:27; Meissner 2006:160–2; Blanc 2018:6). The *s*-stem bases in Group 1 all have a nominal second member in -ής found in compounds that can be analyzed as *bahuvrīhis* as shown in (11):

- (11) a. ἄρκος (Alc. 357.6+) ⇒ ποδαρκής ‘who has a (means of) defense in his feet’ (Hom. *Il.* 1.121+)
 b. τέλος (Hom. *Il.* 2.122+) ⇒ ἀτελής ‘which has no end’ (Hom. *Od.* 17.546)
 c. φάος (Hom. *Il.* 1.605+) ⇒ Παμφάης¹⁵ PN ‘who has all light’ (Pind. *N.* 10.49)

In contrast to other Indo-European languages,¹⁶ in Ancient Greek second compound members in -ής become a productive strategy to create deverbative compounded adjectives (Schwyzer 1939:513; Risch 1974:81–3). Alain Blanc, who dedicated an entire work to -ής adjectives, connects the origin of deverbal -ής

15 The retracted stress is due to the fact that the form is onomastic. For the accentuation of these forms, cf. Blanc 2018:291–305; Lundquist 2016.

16 As Blanc observes (2018:309), Sanskrit second members in -as- can sometimes behave as deverbatives (e.g., *viśvá-bharas-* ‘all-bringing’ *RV* IV 1.19), but the morpheme never acquires a systematic deverbative function, nor do we find lexical correspondences.

second members with the morphological ambiguity of *s*-stems, which could be analyzed by speakers as compound members from either *s*-stems nouns (e.g., τέλος) or their corresponding -έω verb (e.g., τελέω; Blanc 2018:279–90, esp. 287–9 on -τελής). This ambiguity led to the reanalysis—or “métamorphose suffixale” (Blanc 2018:607)—of the derivational morpheme -ής as a strategy to derive verbal second members from verbs directly.

The innovative deverbative -ής second members preferably show intransitive semantics: even when the base verbs can be both transitive and intransitive, the -ής derivatives preferentially select the intransitive semantics (Blanc 2018:351, 357). According to Blanc, the preference for intransitivity is a consequence of the semantics of the compounded adjectives: “les composés sigmatiques expriment une qualité; ils n’expriment pas un procès, mais un état” (2018:359–60). In addition, the semantics of the -έω verbs derived from *s*-stem nouns is also usually stative (Blanc 2018:29; Rau 2009:112 n. 10). Meissner (2005:186–91) instead explains this semantic preference as a consequence of the phonological identity with verbal stems characterized by η, namely intransitive/passive aorists in -ην (12a), stative aorists in -ησ- (cf. also Tucker 1990:57–72) in (12b),¹⁷ and (less frequently) perfect stems with roots containing an η-vowel (12c):

- (12) a. ἐμάνην ‘I went mad’ ⇒ γυναι-μανής ‘mad for women’
 b. ἐγήθησα ‘I was happy’ ⇒ πολυ-γηθής ‘delightful’
 c. τέθηλα ‘I thrive’ ⇒ ἐρι-θηλής ‘very flourishing’

Because these verbal stems already had forms characterized by η, they were the first verbs to adopt the -ής compositional form outside of *s*-stem derivatives. But since they had intransitive semantics, the creation of the first deverbatives in -ής was restricted to verbs with intransitive semantics (Meissner 2006:186–91). This is reflected in the semantics of -ής second members in Homer, which are all either passive or active intransitive (Meissner 2006:192–3).¹⁸

The process of reanalysis reconstructed in Blanc 2018 and Meissner 2006 shows that the synchronic analysis of -ής second members followed an ambiguous

17 Following Watkins 1971:89–92, Tucker (1990:31–3) reconstructs a stative morpheme *-ē-, which is directly reflected in the Greek aorists in -ησ-. According to this reconstruction, the aorists labelled as “stative” are inherited in Greek with the -η- morpheme. As opposed to that, the expected aorist for *s*-stem denominatives is in -εσ(σ)-, but, since -εσ(σ)- is often replaced with -ησ- starting as early as Homer (Blanc 2018:29), the two types eventually merge and the originally stative aorists in -ησ- develop presents in -έω (e.g., γηθέω ‘I rejoice’ from ἐγήθησα ‘I was happy’).

18 With the exception of θυμοδακής; cf. §5.

derivational path from either *s*-stem nouns or -έω verbs, which eventually led to the creation of the innovative deverbative -ής. Based on this development, it is possible to give an alternative interpretation to the compounds in (11), which treats the second members in -ής as verbal instead of nominal (13):

- (13) a. ἀρκέω ⇒ ποδαρκής ‘who defends with his feet’¹⁹
 b. τελέω ⇒ ἀτελής ‘which does not end’
 c. *φαέω ⇒ Παμφάης PN ‘who shines everywhere’

Similarly to second members in -ής, I argue that a parallel morphological overlap obtains for nominal and verbal *s*-stems when employed as first members (cf. (9) above), which allows the reanalysis to apply to the first members as well, and triggers the creation of a first member like φαεσι- which has a verbal interpretation but is based on the noun φάος, not on the unattested *φαέω. As shown in (13c), this reanalysis could have affected the compounded forms of φάος ‘light’, both the second member -φαής²⁰ and the first member φαεσι-, even in the absence of an intermediate -έω verb.

While the morphological identity produces the same reanalysis of nominal elements as verbal for *s*-stems both in the first and in the second member, one crucial semantic difference distinguishes the verbs employed as second members in (13) from those employed as first members in Group 1 (14):

- (14) a. ἀρκεσι- ‘to defend’
 b. τελεσι- ‘to fulfill, complete’
 c. φαεσι- ‘to bring light to’

In accordance with the origin of the category (Meissner 2006:186–96), second members in -ής have intransitive semantics—not unlike all other second members in -ής attested in Homer as collected by Meissner 2006:192–3 (e.g., ἡμιδαής ‘half-burnt’, εὐρρεής ‘well-flowing’, τηλεφανής ‘appearing from afar’, προφερής ‘carried before’, etc.)²¹—while first members in -εσι- are transitive as typically expected for verb-initial compounds, where the second member acts as the direct object of the phrase headed by the verbal first member (e.g., τερψί-μβροτος

19 I consider this use of ἀρκέω ‘to defend’ as intransitive (or ‘absolute’), because the verb does not have an internal argument.

20 In Homeric Greek, a second-member -φαής is never attested. It may be due to chance, since -φαής appears quite frequently in later poetry. The form Εὐρυφάεσσα PN ‘who shines wide’ (*h.Hom.* 31.2+) may suggest the existence of Homeric -φαής, which interfered with the etymological -φασσα, feminine for -φάων (Chaintraine 1999:1168).

21 Meissner’s list contains approx. 60 tokens (for θυμοδακής, cf. §5).

‘delighting mortals’, φερέ-οικος ‘carrying its own house’, etc.). Therefore, I propose that in Homer a parallel process to that described by Meissner (2006) existed where verbs with transitive semantics could create a transitive verbal first member in -εσι- based on the morphological overlap of nominal first members from *s*-stems and the -σι- marker of τερψίμβροτος compounds. This process was fed on the one hand by the similar reanalysis of nominal -ής second members as verbal, and on the other by the existence of purely verbal first members, such as ὄλεσι- described above. As a result, a new derivational pair was created: next to -ής second member deverbatives specialized for intransitive semantics, -εσι- first member deverbatives specialized for transitive semantics.

4 Group 2: verbs with intransitive verbal second members in -ής

The reanalysis of *s*-stem nominal morphology as verbal started with aorist stems in -εσ- and prompted a derivational proportion where intransitive verbal second members in -ής correspond to transitive verbal first members in -εσι-. From there, I propose that this -ής ~ -εσι- correspondence holds even in the absence of a connection to *s*-stems, through the following proportional analogy:

$$(15) \text{-αρκής} :: \text{ἀρκεσι-} = \text{-πηγής} :: x, x = \text{πηγεσι-}^{22}$$

If the morphological overlap of ἄρκος and ἀρκέω in composition produces the compound members -αρκής :: ἀρκεσι- with complementary semantics (intransitive vs. transitive) and distribution (second vs. first member), then from the intransitive second member -πηγής a transitive first member counterpart πηγεσι- can be created, even if an *s*-stem *πῆγος does not exist.

Group 2 contains verbs with -εσι- first members, created by the proportional analogy in (15) on the basis of -ής second members. The -ής second members, all already attested in Homer, display the expected intransitive semantics, even though the base verb is not intransitive, as is the case for πήγνυμι ‘I fix’ and φέρω ‘I carry’. Conversely, the -εσι- first members are transitive, even though the base verb is not transitive, as is the case for ἄημι ‘I blow’ (16). The forms ἄεσι- (16a) and φερεσ(ι)- (16c) call for more detailed commentary. The first appears only in ἀεσίφρων ‘who blows away his sanity’ (then ‘witless, fool’; Hom. *Il.* 20.183+), which is attested as such in all manuscripts of Homer and Hesiod, in Homeric commentators and dictionaries (e.g., Porph. ad *Il.* 15.128.8; Eust. ad *Il.* 4.388.17+), and in late epic poets (e.g., Q.S. 2.83; Nonn. *D.* 1.147).

22 πηγεσίμαλλος ‘fixing, thickening his fleece’, effectively meaning ‘with a thick fleece’ (Hom. *Il.* 3.197).

- (16) a. ἄημι ⇒ -αῖς ‘-blowing’ (intr.)²³ ~ ἄεσι- ‘blowing’ (tr.)
 b. πήγνυμι ⇒ -πηγῆς ‘-fixed’²⁴ ~ πηγεσι- ‘fixing’
 c. φέρω ⇒ -φερῆς ‘-carried’²⁵ ~ φερεσ(ι)- ‘carrying’

A relatively smaller number of sources (Apollon. *Lex.* 2.7; Hsch. α1411.1; Phot. α14.1) attest the alternative reading ἀασίφρων ‘who damages his own mind’ (then similarly ‘witless, fool’), with ἀασι- from ἀάω ‘I damage’. Even if ἀασίφρων is an underrepresented reading, it is standardly adopted by the etymological dictionaries (Chantraine 1999:3; Beekes 2010:3; but *contra* Verdenius 1957:249), where ἀεσίφρων is usually explained as the *lectio facilior* developed by analogy with other -εσι- first compound members. I accept the transmitted reading ἀεσίφρων, as I believe it is the expected transitive counterpart of intransitive -αῖς ‘blowing’, resulting from the productive analogical process I argue for here.²⁶

As for φερεσ(ι)- in (16c), the full form φερεσι- is never actually attested in my dataset, but it appears instead as φερεσ- in φερεσανθής ‘carrying flowers’ (*h.Hom.* 30.14) and φερέσβιος ‘life-bearing’ (*h.Hom.* 2.450+). The first, φερεσανθής, is a simple case of elision, where the final -ι- is expectedly dropped in front of a following vowel. The second, φερέσβιος, is not as straightforward and requires the support of some additional points. First, the verb φέρω produces a well-known verbal first member without -σι- marker, φερε-, found for example in φερέοικος ‘house-carrier’ (i.e., snail, Hes. *Op.* 571), which is the eponym of the entire category. In Homer, Φέρεκλος PN ‘glory-bearing’ (= Φερεκλής, *Hom. Il.* 5.59) is the only compound containing a verbal first member based on φέρω; after Homer, the productivity of verbal first members based on φέρω increases, with a preference

23 ἀκραῖς ‘strong-blowing’ (said of winds; *Hom. Od.* 2.421+), ἀλιαῖς ‘blowing seaward’ (*Hom. Od.* 4.361), ζαῖς ‘much blowing’ (*Hom. Il.* 12.157+), among others.

24 εὐπηγῆς ‘well-fixed, well-built’ (*Hom. Od.* 21.334).

25 προφερῆς ‘carried before, excelling’ (*Hom. Il.* 10.352+).

26 The reading ἀεσίφρων is further supported by independent phraseological evidence collected by Kölligan (2025), which supports the transitive usage of ἄημι in a poetic context. The author reconstructs several transitive usages of verbs meaning ‘to blow’ (such as ἄημι, ἐκπνέω, φυσιάω) with an object meaning ‘mind, soul’ (such as θυμός, φρήν, ψυχή). With the exception of some cases of semi-literal interpretation—where the phrase ‘to blow one’s soul away’ means ‘to pant, to die’—in the other instances the phrases refer to the loss of cognitive faculty and mental clarity, where they mean either ‘to be arrogant, foolish’ or ‘to be inconstant, fickle’. Therefore, the compound ἀεσίφρων ‘who blows away his own sanity’ reflects this metaphorical development and has a formal parallel in the synonymic Hesychian gloss φυσίφρων (φ1058.1). Kölligan further shows that ἀασίφρων probably originated as a mistaken reading influenced by other forms of ἀάω which appear several times in *Hom. Od.* 21.295–303 next to ἀεσίφρων (296: ἄασ(ε); 297: ἄασεν; 302: ἄασθεις).

for φερε- over φερεσ(ι)- (cf. Tribulato 2015:289).²⁷ It is likely, then, that φερεσ(ι)- is a secondary development based on φερε- which only appears starting with Hesiod. Second, since the first syllable of the word βίος ‘life’ is light, a compound with φέρω as the first member would produce a light syllable sequence that cannot be employed in the hexameter either with φερε- (*φερεβίος) or with φερεσι- (*φερεσίβιος). In this case, a purely metrical repair would have entailed an artificial solution such as metrical lengthening on either φερε- (yielding a hypothetical *φερειβίος) or φερεσι- (yielding a hypothetical *φερεσσίβιος, as in τελεσσιεπής (Pind. *Pae.* 52g.2)).²⁸ Instead, the issue is solved by the analogical creation of φερεσ-. The elided version of φερεσ(ι)- in forms like φερεσανθής²⁹ could have played a role in the reanalysis of φερεσ(ι)- as φερεσ-. At the same time, however, φερεσ- could have been created again by analogy with *s*-stem compound morphology. Indeed, the -εσι- morpheme in *s*-stem nominal first members is in allomorphic alternation with the -εσ- morpheme, but the latter morpheme is never selected as an analogical extension for verbal first members.³⁰ Because of this rule, φερεσ- is an exceptional case of selection of the -εσ- morpheme, based on an analogical pattern such as that in (17):

(17) -επής :: έπεσ-³¹ = φερής :: φερεσ-

I believe that this exception is motivated by the fact that, in Homeric Greek, βίος ‘life’ only appears in one other compound, Όρέσβιος PN ‘living on mountains’, attested in Homer (*Il.* 5.707)³² and containing an *s*-stem nominal with the -εσ- allomorph as its first member. This earlier compound could have influenced the later

27 While φερεσι- is only found in the two compounds discussed above, φερεσανθής and φερέσβιος, φερε- is attested in Φερεκύδης PN ‘glory-bearing’ (Hes. Fr. 6.21), φερέζυγος ‘yoke-bearing’ (Alc. Fr. 249.3; Ibyc. Fr. 6.6), φερεμμελής ‘spear-bearing’ (Mimn. Fr. 14.4), and φερεσσακής ‘shield-bearing’ (Hes. *Sc.* 13+).

28 Or even *φηρεσίβιος as in άπερείσιος and άπειρέσιος for *άπερέσιος ‘boundless’, as pointed out to me by Daniel Kölligan.

29 And maybe also φερεσσακής? In φερεσσακής, the gemination comes from an original cluster (< PIE **twek-*, cf. Skt. *tvac-* ‘skin, hide’), but this is the only phonological context where the cluster could surface as a geminate. It is possible that the origin of the gemination was not synchronically accessible and the morpheme boundary was moved from φερε-σσακής to φερεσ-σακής. If this development were true, this form could be considered as another example of φερεσ(ι)-.

30 Cf. n. 14 above.

31 -επής and έπεσ- are the first member allomorphs of έπος ‘word’ as in ήδυεπής ‘sweet-speaking’ (Hom. *Il.* 1.248) and in έπεσ-βόλος ‘throwing words around’ (Hom. *Il.* 2.275), respectively.

32 Note that the second member of αντίβιος ‘opposing force to force, hostile’, έναντίβιος ‘id.’, and ύπέρβιος ‘of overwhelming strength’ is βίη ‘force’, not βίος ‘life’.

creation of φερέσβιος, supplying an acceptable model for the hexametric environment. Despite being an exception, φερέσβιος still confirms the analogical relationship between the compound morphology of nominal *s*-stems and that of verbal first members in -εσι(-).

5 Group 3: prototypically transitive verbs with thematic aorists

As mentioned above (§3), the reanalysis of -ής as a deverbative morpheme is already productive in Homer, where Meissner counts approximately sixty verbs producing -ής second members, often without a corresponding *s*-stem nominal (2006: 192–3). The majority of the Homeric -ής second member deverbatives are based on a thematic present and a smaller number on aorists characterized by η (either intransitive/passive aorists in -ην or stative aorists in -ησ-, cf. (12) in §2). Only the following three forms are derived from thematic aorists based on a zero grade:³³

- (18) a. ἔθανον ‘I died’ ⇒ δισθανής ‘twice dead’ (Hom. *Od.* 12.22)
 b. ἔπαθον ‘I suffered’ ⇒ αἰνοπαθής ‘terribly suffering’ (Hom. *Od.* 18.201)³⁴
 c. ἔδακον ‘I bit’ ⇒ θυμοδακής ‘soul-biting’ (Hom. *Od.* 8.185)

Similarly, the forms from my dataset that are collected in Group 3 correspond to zero-grade thematic aorists:

- (19) a. ἦλφον ‘I yielded’ ⇒ ἀλφεισίβοιος ‘who yields oxen’ (Hom. *Il.* 18.593+)
 b. ἔταμον ‘I cut’ ⇒ ταμεσίχρως ‘cutting skin’ (Hom. *Il.* 4.511+)
 c. ἔλιπον ‘I left’ ⇒ λιπιδάνωρ ‘who leaves her husband’ (Stesich. Fr. 46.5)

The forms in (18c), θυμοδακής ‘soul-biting’, and (19c), λιπιδάνωρ ‘who leaves her husband’, will be addressed below, as they are instructive of the later development of their respective categories.

I believe that these forms, both with -ής second members (18a)–(b) and -εσι- first members (19a)–(b), are created based on the derivational pattern reconstructed in §3: the -ής deverbative morpheme is employed for the verbs with intransitive semantics, ἔθανον and ἔπαθον, while the -εσι- deverbative morpheme is employed for the verbs with transitive semantics, ἦλφον and ἔταμον. This derivation is supported by a formal point of contact between thematic aorists and *s*-stem denominatives in -έω: both verbal paradigms have an infinitive in -εῖν (e.g., θανεῖν and ἄρκεῖν). The key role of the infinitive morphology in -εῖν is especially evident in

33 Given the scarcity of our evidence, I am not considering ἐμμαπέως from *μαπεῖν (Blanc 2018: 424).

34 On this form, cf. Lundquist 2021.

the case of *ταμεσίχρως* ‘cutting skin’. This compound is attested three times in the *Iliad*, always referring to *χάλκος* ‘bronze (part)’, that is, the sharp point of a spear (Hom. *Il.* 4.511, 23.803), or to *ἔγχος* ‘spear’ via metonymy (13.340). Next to this form, we also find the phrase *ταμέειν χροά* in the formula *ταμέειν χροά νηλέϊ χαλκῷ* ‘(he) cut (someone’s) skin with the pitiless blade’ (Hom. *Il.* 13.501, 16.761), which again involves the lexeme *χάλκος*. Crucially, the metrical slot occupied by *ταμεσίχρως*, a dibrach (two light syllables) and a dactyl after the penthemimeral caesura (||), is the same as the phrase *ταμέειν χροά*, as shown below:

- (20) a. *χαλκὸν ἀνασχέσθαι | ταμεσίχροα βαλλομένοισιν* (Hom. *Il.* 4.511)
 b. *ἴεντ’ ἀλλήλων | ταμέειν χροά νηλέϊ χαλκῷ* (Hom. *Il.* 13.501)

This phraseological parallel confirms that *-εῖν* infinitives act as the triggers of the analogical extension of *s*-stem compound morphology to zero-grade thematic aorists.

As a consequence, I agree with Tribulato that some *-εσι-* verbal first members are indeed created analogically for verbs with asigmatic aorists. In contrast to Tribulato’s analysis (2015:170–1; cf. §2), however, I argue that this is the endpoint of a process that involves the reanalysis of the *s*-stem compound morphology as deverbative, the concurrent productivity of the deverbative usage of second members in *-ής*, the phonological identity of the infinitive morphology in *ϑσ-εῖν*, and the support of phraseology. All these elements explain why the presence of *-εσι-* first members cannot be predicted on the sole basis of the morphology of the aorist stem, and more specifically why not all asigmatic aorist stems receive the “*-εσι-*extension” and why the “*-εσι-*extension” does not only appear with asigmatic aorist stems.

From a historical point of view, the derivational pattern that matched intransitive semantics with *-ής* second members and transitive semantics with *-εσι-* first members remained essentially a Homeric linguistic “experiment.” After Homer, the creation of new *-εσι-* first members is an artificial derivational strategy, in which the *-σι-* marker of the *τερψίμβροτος* type is attached to an existing verbal first member in *-ε-* of the *φερέοικος* type (cf. §6). This derivation has nothing to do with *s*-stem morphology and is entirely dependent on the existence of an *-ε-* verbal first member counterpart. Starting already from Archaic Greek, the verb-initial compounds in *-εσι-* are perceived as elevated and only employed in archaizing contexts, such as poetry and onomastics. The form in (19c), *λιπεσάνωρ* ‘who leaves her husband’, exemplifies the usage of *-εσι-* as a poetic resource: the form is a neologism created by Stesichorus to describe Helen as an unfaithful wife and

it is in all likelihood based on ὀλεσάνωρ ‘man-destroying, mortal’, attested again in Stesichorus (Fr. S15.2.6) and in Theognis (1.400: ὀλεσήνωρ).

Outside of these archaizing contexts, the reasons why the Homeric system (intransitive -ής ~ transitive -εσι-) ceased to be productive are difficult to determine. It is likely that after Homer the language developed a preference for right-headedness not only in compounds (Tribulato 2015:326–7) but also in the order of phrasal constituents (Taylor 1994), which favored the acquisition of transitive semantics also for second members in -ής (Meissner 2006:193–6). This development appears as early as Homer in θυμοδακής ‘soul-biting’ (18c). The form is connected by Meissner (2006:193) to the phrase δάκε φρένας (Hom. *Il.* 5.493) and to the post-Homeric verb-initial version of this compound, δακέθυμος, attested in Simonides (58.5) and Sophocles (*Ph.* 705). These parallels confirm that θυμοδακής is the first example of extension of the transitive semantics to verbal second members in -ής.

6 Group 4: verbs with an alternative -ε- first member

Group 4 contains the four verbal stems that exhibit a verbal first member in -εσι- (τερψίμβροτος type) next to a verbal first member in -ε- (φερέουκος type). In particular, the only Homeric attestation of an -ε- ~ -εσι- pair is based on the verb ἔλκω ‘to drag’, which produces the two semantically equivalent compounds ἔλκεχίτων ‘tunic-trailing’ (Hom. *Il.* 13.685) and ἔλκεσί-πεπλος ‘robe-trailing’ (Hom. *Il.* 6.442). The quasi-synonymy of the two forms suggests that they are metrical alternatives which cover two different environments in the Homeric hexameter: the final adonius for ἔλκεσίπεπλος (– ∪ ∪ – –) and a choriamb for ἔλκεχίτων (– ∪ ∪ –).

The model for this pair may come from the more productive verbal first member morphology of φέρω, which gives both φερε- and φερεσ(ι)- (cf. §4), according to the following proportion:

$$(21) \text{ φερε-} :: \text{φερεσ(ι)-} = \text{ἔλκε-} :: \text{ἔλκεσι-}$$

There might be reason to believe, however, that the pair ἔλκε- ~ ἔλκεσι- emerged for independent morphological reasons, and only afterwards did it become itself the model for metrical alternatives. On the one hand, ἔλκε- is the expected verbal first member of the φερέουκος type based on the present stem of the verb. On the other, the creation of ἔλκεσι- could have been influenced by the *s*-stem noun ἔλκος ‘wound’. The verb ἔλκω, from PIE **selk-* ‘to draw’ (cf. Lat. *sulcus* ‘furrow’), and the noun ἔλκος, from PIE **(h₁)elk-os* ‘ulcer’ (cf. Lat. *ulcus*, Skt. *ársas-* ‘id.’), are not etymologically related, but the unetymological aspiration on ἔλκος is usually motivated by the association with the verb ἔλκω where the

aspiration is expected (e.g., Chantraine 1999:339–40; Beekes 2010:412). The two forms could have been connected by folk etymology based on the fact that ἔλκω can refer to violent actions—such as ‘draw, drag, with collat. notion of force or exertion’, ‘tear in pieces’, ‘tear one’s hair’ (LSJ s.v. ἔλκω)—which result in physical harm, or wounds.

Regardless of its origin, the pair ἔλκε- ~ ἔλκεσι- produces a useful model for the creation of metrical alternatives in -εσι- starting from an existing verbal first member in -ε-. Noticeably, all the post-Homeric attestations of analogical -εσι- first members indeed have an -ε- counterpart. This applies to the other three verbs in Group 4—ἀγεσι-,³⁵ ἀρχεσι-,³⁶ and χαιρεσι-³⁷—but also to all the later attestations not discussed here.³⁸ These three forms in Group 4 also represent a sample of the contexts where -εσι- first members are found after Homer: they are employed as archaisms in poetry (ἀρχεσι-) and as a strategy to create archaic-sounding names in onomastics (ἀγεσι- and χαιρεσι-).³⁹

7 Conclusion

In this paper, I showed that the class of verbal first members in -εσι- is not a homogeneous group, but its origin is ultimately connected with neuter *s*-stems. The analysis of Tribulato (2015) invokes analogy and metrical constraints as the sources of the development of this class, but I argued in §2 that they do not provide a satisfactory explanation.

I therefore reconstructed a Homeric Greek process parallel to the deverbative formation of verbal second members in -ής, which produces verbal first members in -εσι- by analogy with the compositional forms of *s*-stems. There is a strict semantic distribution: verbal second members in -ής have intransitive semantics,

35 Ἀγεσλαΐδας PN ‘who leads his people’ (Alc. Fr. 130.9) vs. ἀγε- (e.g., in ἀγέστρατος ‘host-leading’, Hes. *Th.* 925).

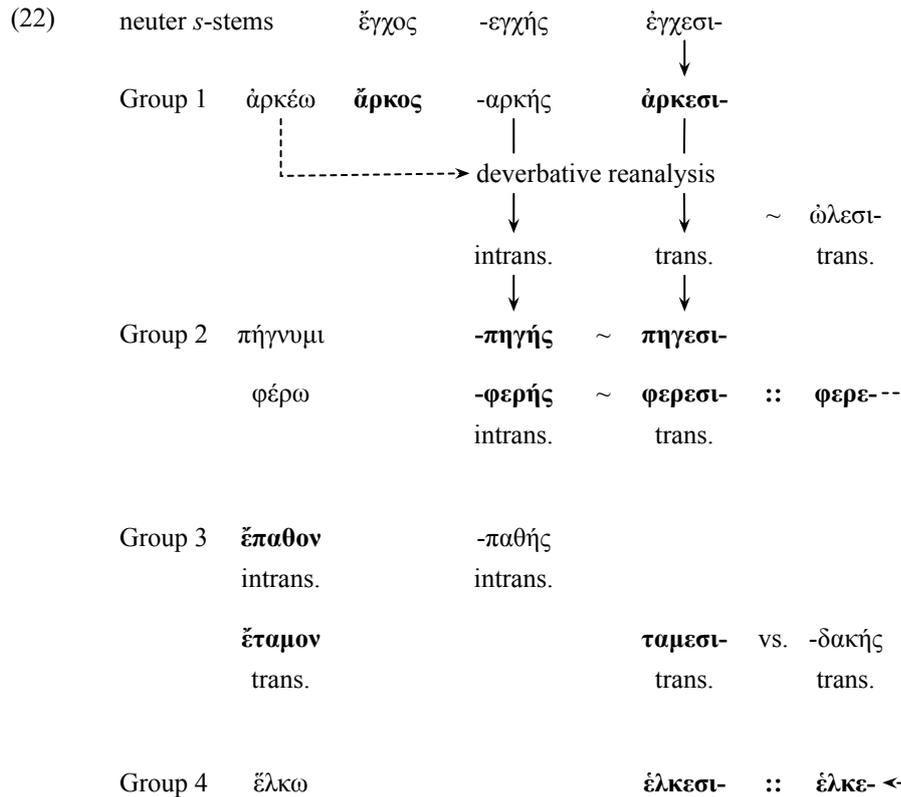
36 ἀρχεσίμολπος ‘who begins dances’ (Stesich. Fr. 73) vs. ἀρχε- (e.g., in Ἀρχεπτόλεμος PN ‘who begins war’, Hom. *Il.* 8.128+).

37 Χαιρεσί[λαος] PN ‘who rejoices in his people’ (Hes. Fr. 251a.10) vs. χαιρε- (e.g., in χαιρέκακος ‘who rejoices in (another’s) misfortune’, Aesop. 247.10).

38 For example, ἐγρεσι- (e.g., in ἐγρεσίους ‘building houses’, Man. 4.325) vs. ἐγρε- (e.g., in ἐγρεμάχης ‘rousing the fight’, *h.Hom.* 2.424+). There is only one instance of a pair based on πηγρεσι- vs. πηξι- (only in πηξιθάλαττα ‘sea-freezing’, Phryn. *PS.* 105.12): καμπεσι- (e.g., in καμπεσίγυιος ‘limb-bending’, Orph. *L.* 34) vs. καμψι- (e.g., in καμψίπους ‘foot-bending’, Aesch. *Th.* 791).

39 For a similar process involving the analogical use of “Caland-*i*” in onomastics (e.g., in Ἀρχίλοχος PN ‘ambush leader’, Pind. *O.* 9.1+), cf. Meissner 2006:21.

while verbal first members in -εσι- have transitive semantics. The following discussion and diagram (22) summarize my reconstruction of the development of verbal first members in -εσι-.



It starts with denominative verbs from neuter *s*-stems (e.g., ἀρκέω; Group 1, §3), which also produce second members in -ής (e.g., -αρκής). As these are reanalyzed as deverbative, also the possibility of a first member in -εσι- with verbal interpretation arises and specializes for transitive meanings (e.g., ἀρκεσι-). The new derivational rule is then applied to deverbative verbal second members in -ής with intransitive meaning (e.g., -πηγής), yielding verbal first members in -εσι- with transitive meaning (Group 2, §4). When the derivational rule is applied to thematic aorists (e.g., ἔπαθον and ἔταμον), it produces non-overlapping intransitive verbal second members in -ής (e.g., -παθής) and transitive verbal first members in -εσι- (e.g., ταμεσι-; Group 3, §5). Once the new class of τερψίμβροτος compounds in -εσι- is created, it patterns with the class of φερέοικος compounds in -ε-, thus effectively creating -ε- ~ -εσι- pairs (e.g., ἔλκε- ~ ἔλκεσι-) and facilitating the

derivation of first verbal compound members of the *τερψίμβροτος* type by attaching the *-σι-* marker to an existing *-ε-* form of the *φερέουκος* type (Group 4, §6). The word formation rule that derives verbal first members in *-εσι-* as just described ceased to be productive already in Homer, where the first instance of its concurrent formation occurs, namely transitive verbal second member in *-ής* (*θυμοδακής*). Compounds in *-εσι-* remain in the lexicon of poetry and onomastics as archaisms.

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