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THE EMERGENCE OF THE *HOI EPÊLT^{H}E PTAREÎN* IMPERSONAL CONSTRUCTION IN ANCIENT GREEK*

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Abstract This paper focuses on the spread of a particular impersonal construction featuring an argument structure with a dative or accusative coded argument and a noun clause in Ancient Greek. It aims to demonstrate that the construction under analysis expands in its functional domain considerably over time, both in terms of productivity and frequency. Furthermore, it argues that the spread of this impersonal construction was facilitated by a bridging context involving neutral alignment, where some subject properties are lost both on a semantic (agentivity, referentiality) and on a morphosyntactic level (dedicated encoding, verb agreement), such as when a neuter pronoun takes the subject function.

1 Impersonal Constructions

Ancient Greek (henceforth AG), like most IE languages, has a group of verbs that allow an impersonal construction (from now on IC): i.e., a construction lacking an argument with the formal features of a subject. Traditional grammars signal that, on the one hand, verbs with an IC appear to be quite scarce in AG and that, on the other hand, they increase to some extent in Classical Greek (CG), as compared to earlier stages of the language, such as Homeric Greek (HG). For instance, speaking about «quasi-impersonal verbs and expressions», Smyth states that «Homer shows only the beginning of the use of the infinitive as a real subject, i.e. not a grammatical subject» (1956: §§ 1984–1985); in the same vein, Wackernagel observes that «[w]as aber δεῖ betrifft, so vollzieht sich dessen Gestaltung zum Impersonale vor unsern Augen» (1924: 189).[1]

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1 «as far as *deî* is concerned, its transformation into an impersonal takes place before our eyes».

ICs, despite being a classical topic of research in Indo-European studies, have been lacking an exact definition for a long time, and the label 'impersonal' has been used as an umbrella term to describe quite diverse linguistic phenomena (Tronci 2022: 319). However, the scope of this linguistic change – i.e., how many verbs develop an IC and how frequent it is –, as well as the factors that promote it are yet to be identified. More recently, impersonals have also aroused interest from a typological perspective, expanding the traditional Indo-European centered field of inquiry to a greater and more diverse variety of language families.[2] This engendered the need to establish a suitable cross-linguistic definition of ICs, which might also shed new light on the variegated nature of ICs back in IE languages.

Since this paper deals with the spread of a particular IC in AG, it first reviews the literature on ICs in general, before addressing ICs specific to AG.

1.1 Indo-European studies

The vagueness associated with the label 'impersonal' originates from Brugmann's (1925: 22ff. §§16–22) classification of ICs in IE languages, which includes at least six semantically and structurally different expressions:

i. meteorological expressions (Gk. *neíp^{h}ei* 'it snows', Lat. *tonat* it thunders);[3]

ii. expressions of mental or physical states (Lat. *me pudet* 'I am ashamed'; Gk. *moi mélei* 'I care'; NHG. *mich hungert* 'I am hungry');

iii. happenstance expressions (Skt. *prajā́bhyo 'kalpata* 'the creatures prospered', TS 7, 2, 4.1; Gk. *prok^{h}ōreî moi* 'I succeed');

iv. presentative expressions (Ger. *es gibt* 'there is');

v. agentless passives (Lat. *itur* 'people go');[4]

2 Among the studies on ICs with a typological perspective cf., *inter alia*, Creissels 2007, 2019 and 2024 (243ff. §6) for a typology of ICs related to alignment patterns; Siewierska 2008 and the contributions to the special issue of Transactions of the Philological Society 106(2), on Indo-European languages and Finnish; the contributions in Donhue & Wichmann 2008 on languages with semantic alignment (see especially Malchukov 2008) and Malchukov & Siewierska 2011 on ICs in a typological perspective. Cf. also Zúñiga & Kittilä (2019: 82ff. §3) on passive impersonals.

3 As for this group, it should be remarked that some ancient Indo-European languages show a concurring construction with an overt subject, having a god as referent (e.g., Lat. *Iupiter tonat* 'it/Jupiter thunders') (cf. Romagno 2022), a pattern that also occurs cross-linguistically (Eriksen, Kittilä & Leena 2012).

4 It should be noted that Brugmann's label «passivische Impersonale» (*ibidem*: §22) is purely

vi. 'man-Sätze' (Ger. *man sagt* 'It is said').

As noted by Cuzzolin (2006, 2012: 30), the same terminological vagueness is also seen in some recent literature.

1.2 Typological studies

Some significant progress in the understanding of impersonals comes from typology. Malchukov & Siewierska (2011), collecting data from a typologically variegated sample of languages, define ICs as a comparative concept (as intended in Haspelmath 2010 and Alfieri, Arcodia & Ramat 2021). Following Siewierska (2008), they distinguish between agent-defocusing constructions (pragmatic approach) and constructions lacking a subject (syntactic approach), which, despite being functionally very different, are sometimes grouped together in literature under a purely formal criterion (Malchukov & Siewierska 2011: 2). On the one hand, agent-defocusing impersonals involve a pragmatic choice by the speaker, who decides not to include the Actor in the linguistic representation of the event, although it is present in the semantic structure of the event. ICs that lack a subject, on the other hand, are further subdivided into four groups (examples are given by the author):

i. impersonals with a non-fully referential subject (Lat. *Iuppiter tonat* 'it thunders'; Skt. *varṣatīndro* [*varṣati Indraḥ*] 'it rains', BhāgPur, 3, 25, 43.2);

ii. impersonals with a non-canonical subject (Lat. *me pudet* 'I am ashamed');[5]

iii. impersonals with an expletive subject (Fr. *il y a une fille* 'there is a girl');

formal, since this kind of ICs are not functionally passive and in some languages (*e.g.* in Latin) they are compatible with both transitive and intransitive verbs. Moreover, the same label is extended to AG, where, except for the Aorist system, passive endings formally coincide with middle-voice ones.

5 Some scholars refer to impersonals of type (ii.) as non-canonically marked subject constructions. The literature on non-canonical subjects is extensive and cannot be reviewed here: cf. *inter alia* Cole, Harbert, Hermon & Sridhar 1980, Aikhenvald, Dixon & Onishi 2001, Seržant & Kulikov 2013, Barðdal & Eythórsson 2018; on subject tests applied to AG cf. Conti 2008, 2009, 2010, Danesi, Johnson & Barðdal 2018, Benedetti & Gianollo 2020, Barðdal, Cattafi, Bruno & Danesi 2023; on partitive genitive occurring in argumental position cf. Seržant 2012, Luinetti (in prep. a); on the cognitive motivation of non-canonical subjects in IE langages cf. Viti 2017; on a pragmatic explanation of some accusative marked subject in presentative constructions cf. Lazzeroni 2013.

iv. impersonals completely lacking a subject (it. *piove* 'it rains').[6]

From the same cross-linguistic perspective, Malchukov & Ogawa (2011) propose a semantic map of impersonals , arguing that «different functional varieties of impersonals show preferences for different coding strategies» (*ibidem*: 44): in other words, across languages, each coding strategy tends to be associated with the loss of some particular subject properties. [7]

Lastly, in a more formally-oriented cross-linguistic typology of ICs, Creissels (2007; 2019) remarks on the importance of a distinction – which is adopted in this paper – between 'impersonality', as a «label for the traditional grouping of various phenomena that share nothing more than some vague family resemblance», and 'impersonal constructions', referring to a specific subset of constructions that can be defined as a «departure from what can be analyzed as the canonical type of verbal predicative construction in a given language» (2019: 1–2).

1.3 Ancient Greek grammars

As already noted by Tronci (2022), despite typological advances, even the most recent grammars of AG are still affected by the Brugmannian generic use of the term 'impersonal'. Ultimately, this leads to a lack of the crucial functional distinction between syntactic and pragmatic ICs.

For instance, Crespo, Conti & Maquieira (2003: 229) vaguely define as impersonals those verbs that «con frecuencia no tienen sujeto y, en caso de tenerlo, designa una situación, nunca una entidad, o tiene un referente indefinido».[8] In van Emde Boas, Rijksbaron, Huitink & de Bakker (2019: 465ff. §36) a chapter is dedicated to ICs, where they distinguish between «quasi-impersonal verbs», which have an (accusative and) infinitive or a subordinate clause as a subject, and «proper impersonal verbs», which completely lack a subject. However, passive impersonals, weather verbs and generic uses of the 3rd person plural all fall into the latter group without distinctions. This classification is a syntax-centered revision of the more semantically oriented one proposed by Smyth (1956: 256 §§932-935), and it inherits some of its issues. Even the very recent Greek Syntax by Jiménez López (2020) does not

6 It should be noted that type (iii.) and (iv.) might be considered as variants of the same type, depending on the typological distinction between pro-drop (like Italian) and non-pro-drop languages (like French).

7 The framework of Malchukov & Ogawa (2011) has been adopted for AG by Tronci (2022), whose main focus is on the textual distribution of impersonals.

8 «usually do not have a subject and, if they have one, it denotes a situation, never an entity, or it has an indefinite referent».

have a unitary section dedicated to impersonals: in a section dedicated to «sujetos genéricos»[9] ICs alternating with personal constructions are addressed (in particular *dokéō* and *-téon* verbal adjectives), together with passive impersonals and the generic use of second and third person, disregarding the distinction between syntactic and pragmatic ICs (Riaño Rufilanchas 2020: 163 ff.); the impersonal passive is then addressed again tangentially in the section dedicated to the passive voice (Méndez Dosuna 2020: 584 ff.).

1.4 Functionalist approaches to AG impersonals

The classification of AG ICs adopted here is that proposed by Dahl (2013) in EAGLL, which is perfectly compatible with the one by Malchukov & Siewierska (2011):[10]

i. weather verbs, like Gk. *astráptei* 'it lightnings';

ii. verbs denoting a mental or physical state, which can be further subdivided into:

   a. Dative Experiencer and Genitive Stimulus, like Gk. *mélei moi toûtou* 'I care about it';

   b. Dative Experiencer and clausal complement, like Gk. *aréskei moi hóti* ... 'I like that';

iii. verbs denoting modality, like Gk. *deî moi* 'I have to';

iv. generic 3rd person plural verbs, like Gk. *p^{h}así* 'they say';

v. generic 2nd person singular verbs, like Gk. *p^{h}êis* 'you say';

vi. 3rd person singular mediopassive verbs, like Gk. *martureîtai* 'testimony is borne'.

Type (i) impersonals should be considered separately, since they have a zerovalent argument structure, and would be better described as subjectless verbs. ICs of type (iv) to (vi) are agent-demoting strategies, which lie outside the scope of this work. Lastly, the distinction between type (ii) and type (iii) is semantic; nevertheless, a transversal grouping can be made, based on a syntactic criterion, dividing between DAT-GEN ICs, including type (ii.a), and DAT-NCL ICs (where NCL stands for noun clause), including type (ii.b) and

9 «generic subjects».

10 In the same volume, cf. also Bauer (2013), who distinguishes three classes of syntactic impersonals upon a semantic criterion.

type (iii). This classification allows us to make a clear distinction between the different kinds of ICs. The focus of this paper is indeed on DAT-NCL ICs, which can be included in type (ii) of Malchukov and Siewierska's classification: for the sake of simplicity, this kind of ICs will be called *hoi epêlt^{h}e ptareîn* ICs ('he happened to sneeze' Hdt. 6, 107.3).

1.5 Diachronic trends of ICs

In literature, various positions regarding the diachronic trends of ICs are expressed. In contrast with traditional grammars, recently some scholars claim that ICs are recessive in AG. For instance, Bauer states that AG «[a]t an early time already [...] no longer had many impersonal verbs left» (Bauer 2000: 129; cf. also 2013), following the same diachronic trend ostensibly observed in Romance languages and English, where ICs denoting experience shifted to personal constructions; a similar claim is also found in Cuzzolin (2012: 36), according to whom non-canonical subject ICs are progressively decreasing in some IE languages, namely Italic and Germanic languages (e.g., OHG. *mich/mir graust* 'I am ashamed' vs. Ger. *ich schäme mich*, 'id.').[11] Moreover, AG is often said to have few to no ICs of this kind at all (Cuzzolin 2006; 2012: 37; Cuzzolin & Napoli 2009: 76). This may be one of the reasons why AG ICs have received moderate attention from scholars, even in recent years. However, the overall picture is less straightforward. On the one hand, one can generally agree in saying that *hoi epêlt^{h}e ptareîn* ICs are very scarce in Homeric Greek; on the other hand, the situation becomes more nuanced in the case of Classical Greek. It would be useful to check whether ICs in CG are actually as scarce as those in HG.

In this paper, we aim to demonstrate that the degree of productivity of *hoi epêlt^{h}e ptareîn* ICs changes throughout the diachrony of AG: in particular, they become more widespread in CG, both in terms of frequency and in the number of lexemes compatible with the IC. We propose that an already existing type of IC –albeit restricted to a very limited class of verbs –becomes

11 However, this type of ICs has become widely productive, and far from being recessive, in some Slavonic languages (as it is noted also by Cuzzolin 2012: 37) and Baltic languages (cf. *inter alia* Holvoet 2001). *E.g.*, in Russian they are used to express bodily sensations (in addition to *menja znobit* 'I have a temperature', *mne ploho* 'I feel sick'), emotions (*mne stydno* 'I feel ashamed' and *mne hočetsja* 'I feel the need'), happenstance or uncontrolled situations (*mne povezlo* 'I've been lucky') and mental activity (*mne snilos' ob ėtogo* 'I dreamt about this' and *mne vspomnilos' ob ėtogo* 'I remembered about this'). An IC can occur in Russian both with a predicative adverb (*mne stydno*) and with a 3rd person singular verb (*mne hočetsja*): in the latter case, the verb always takes the reflexive ending, which has been analyzed also as a valency reduction marker (cf. *inter alia* Onishi 2001: 7). On the spread of Dative marked experiencers, also in ICs, in the circum-Baltic area cf. Seržant 2015.

available for a greater number of verbs, and we aim to precisely describe the phases of this process, with particular attention to the morphosyntactic factors that allow an IC to develop from a personal construction. In order to do so, data are analyzed through a classification of constructions intended as progressive departures from the prototypical personal construction.

This paper contributes not only to classical studies, providing a better understanding of how widespread ICs are in AG and how they developed, but also to Indo-European studies, showing that ICs in AG cannot be considered exclusively as a relic inherited from the common language. More in general, this analysis contributes to the understanding of the general mechanisms of syntactic change that underlie the development of ICs, which has remained an understudied topic.[12]

2 Alignment in Ancient Greek

As noted by Creissels (2024: 234ff., 2007: 31ff.), ICs have a crucial connection with alignment systems. Therefore, a full overview of the AG alignment system is required in order to gain a better understanding of ICs.

AG features a gender-based split alignment system, for both argument flagging and verbal indexation. Masculine and feminine arguments follow the accusative alignment, using the same set of morphological markers (the nominative case) for the first argument of bivalent predicates and for the only argument of monovalent predicates, and a different set of morphological markers (the accusative case) for the second argument of bivalent predicates; neuter arguments, on the other hand, follow the neutral alignment, since their nominative and accusative markers have syncretic forms, causing the morphological distinction between the first and second arguments of bivalent predicates to collapse (1a-c). For example:[13]

(1) a. τὸ ὕδωρ [...] ἐποίησε βραδύτερον αὐτοὺς ἐλθεῖν.

tò	*húdōr* [...]	*epoíēs-e*	*bradúteron*
DET.N.DIR.SG	water(N).**DIR**.SG	make.AOR-3SG.ACT	slower

12 A notable exception is the work by Sigurðardóttir & Eythórsson (2022) on case preserving anticausatives in Icelandic.

13 Examples are glossed following the Leipzig Glossing Rules and the following abbreviations are used: ACC = accusative; ACT = active; AOR = aorist; CPL = complementizer; DAT = dative; DET = determiner; DIR = direct; DU = dual; F = feminine; GEN = genitive; INF = infinitive; IPF = imperfect; IPV = imperative; M = masculine; N = neuter; NCL = noun clause; NEG = negation; NOM = nominative; MID = middle; PASS = passive; PL = plural; PRS = present; PTC = participle; PTCL = particle; REL = relative; SBJ = subjunctive; SG = singular. Translations are taken from Loeb Classical Library editions of the texts.

autoùs *elt^{h}-eîn*
3PL.ACC arrive.AOR-INF.ACT
'The water [...] made their arrival slower.' (Thuc. 2, 5.2)

b. [οἱ Αἰγύπτοι] οἶνόν τε καὶ ὕδωρ ἐσεφόρεον ἐς αὐτόν.

[hoi *Aigúpt-oi]* *oîn-ón* *te kaì*
DET.M.NOM.PL Egyptian(M)-NOM.PL wine(M)-ACC.SG and
húdōr *esep^{h}óre-on* *es* *autón*
water(N).**DIR**.SG bring.IPF-3PL.ACT to him
'[the Egyptians] brought wine and water to him.' (Hdt. 3, 11.3)

c. τὸ ὕδωρ γίγνεται χλιαρόν.

tò *húdōr* *gígn-etai*
DET.N.DIR.SG water(N).**DIR**.SG become.PRES-3SG.MID
k^{h}liar-ón
warm-N.DIR.SG
'The water becomes warm.' (Hdt. 4, 181.4)

The neuter noun *húdōr* 'water' has the same form, be it as the first argument (1a), second argument (1b) of bivalent verbs or as the only argument of monovalent verbs (1c).

Also, in Attic, neuter nouns and pronouns, whilst being the first or only argument, generally do not trigger number agreement with the verb: in such cases, the verb consistently exhibits a 3rd person singular ending (this is what is traditionally called *sk^{h}êma attikón*, cf. Cotticelli & Dahl 2022: 81 ff.).[14] For example:

(2) τῇ χιλός τε τοῖσι ἵπποισι καὶ ὕδατα ἦν.

têi *k^{h}il-ós* *te* *toîsi* *hípp-oisi* *kaì*
where hay(M)-NOM.SG and DET.M.DAT.PL horse(M)-DAT.PL and
húdata *ên*
water(N).DIR.PL be.IPF.3SG

14 In Attic there are only few exceptions to this tendency: *e.g.*, *phanerà êsan kaì híppōn kaì anthrṓpōn íkhnē pollá* 'many traces both of horses and of men were plain' (Xen. *Anab.* 1, 7.17). This can be explained by the stress put on «the fact that the neuter plural subject is composed of persons or of several parts» (Smyth 1956: 264). For some other examples cf. (Cooper 1998: 1015ff.): the number agreement is mainly triggered by neuter nouns referring to animate entities (*e.g.*, Gk. *tà zôia* 'the animals', *tà meirákia* 'the youth') or denoting names of holidays (*e.g.*, Gk. *Olúmpia*, *Kárneia*, *Íst^{h}mia*). Neuter plural nouns agreeing in number with the verb are found also in Doric (Cassio 2008: 75). For a comparison of the incidence of the plural agreement pattern between Homer, Hesiod, Herodotus, and Thucydides cf. Dahl (2021).

'Where there was hay and water for the horses.' (Hdt. 4, 140)

The traditional explanation for this behavior refers to the fact that neuter plural nominals could be read as collectives in a more archaic phase of the language (Smyth 1956: 264; Cotticelli & Dahl 2022: 83; Dahl 2022: 60).[15] In HG a slightly more nuanced situation is observed: in most cases, neuter nominals also lack agreement. However, in a few cases (amounting to slightly more than one fourth of the total, cf. Dahl 2021: 91ff.) they trigger number agreement with the verb, as shown in example (3), similarly to masculine and feminine nominals (Cotticelli & Dahl 2022: 83).[16]

(3) καὶ δὴ δοῦρα σέσηπε νεῶν καὶ σπάρτα λέλυνται.

kaì	*doûra*	*sésēp-e*	*neôn*	*kaì*
and	plank(N).DIR.PL	rot.PF-3SG.ACT	ship(M).GEN.PL	and
spárt-a	*lélu-ntai*			
rope(N)-DIR.PL	untie.PF-3SG.MID			

'The planks of the ship are rotten, and the ropes are untied.' (Hom. *Il*. II, 135) (Cotticelli & Dahl 2022: 83)

The example shows how the neuter plural *doûra* 'planks' does not trigger agreement with the verb *sésēpe* 'it is rotten', as would be expected to happen in CG. Nevertheless, the next neuter plural *spárta* 'ropes' does trigger agreement with the verb *léluntai* 'they are loosened'.[17] For this reason, HG would be better described as having a complex alignment system, structured into two levels: the nominal morphology and the pattern of agreement. Nonetheless, for the sake of this analysis, it is sufficient to consider the neutral split, involving the morphological coding of neuter nouns and pronouns, occurring in the main accusative alignment.

15 However, there are some instances of neuter plural nouns agreeing with singular verbal forms which cannot be interpreted as collectives: *e.g. ésti dè Mēdōn tosáde génea, Boûsai Parētakēnoì Stroúk^{h}ates Arizantoì Boúdioi Mágoi* (Hdt. 1.101) 'There are this many tribes of the Medes: the Busae, the Paretaceni, the Struchates, the Arizanti, the Budii, the Magi', where *tosáde génea* has more likely a distributive meaning (I am grateful to Eystein Dahl for showing me this passage).

16 According to Dahl (2021), the singular pattern of agreement is older, as proven by comparative evidence. The later innovation of the plural pattern of agreement would have been lost because its functional domain was included in the unmarked singular pattern, resulting in a failed change.

17 Anyway, one cannot completely rule out the possibility that *metrikè anágkē* might play some role in this choice, as claimed by Smyth (1956: 264).

3 Data and Methodology

In this section, we present the data (lemma and corpus selection) and the procedure of extraction and annotation.

3.1 Verb sample and corpus selection

The sample of verbs analyzed in this paper was obtained through a series of refinements of an initial sample of 224 verbs labeled with 'impers.' in the Liddle-Scott-Jones Greek-English Lexicon. Since the label 'impers.', as discussed before, is traditionally employed with an ambiguous meaning, zerovalent verbs and passive impersonals were manually excluded from the initial sample: the full list of AG verbs with an IC involving lack of morphosyntactic agreement with the first argument, analogous to the Gk. *moi dokeî* type, was thus obtained. All verbs whose IC is attested for the first time in post-CG (from III cent. BCE on) were also excluded because they are very few and they do not behave differently from CG ICs, resulting in a sample of 53 verbs (cf. Appendix A). Then, the verbs with an IC involving a dative Experiencer and a genitive Stimulus were also excluded from the list (e.g., *nēoû d' hēmetérou Didúmois álloisi melḗsei* [Hdt. 6, 19] 'Others will take care of our shrine in Didyma.'), since they likely follow a different path of development.[18] Only 24 verbs out of the 55 listed are attested in HG (cf. Appendix A), some of which exclusively with a personal construction. Eight of these verbs already have an IC in HG: namely, *handánei*, *ep^{h}andánei*, *deî*, *eíkei*, *éoike*, *epéoike*, *mélei*, and *khrḗ*.[19] The latter eight verbs were again excluded from our analysis, because there is no diachronic change in the type of constructions that they occur in. Lastly, the verbs *dokeî* and *p^{h}aínetai* were excluded because their ICs developed along a different path, and are the only ones attested with *nominativus cum infinitivo* constructions, (see Luinetti in prep. b); the verb *parékhei* was excluded because it is the only ditransitive one. The resulting final sample (see Table 1) is composed of thirteen verbs attested both in HG and CG and occurring in a *hoi epêlt^{h}e ptareîn* IC only in CG. These are the verbs that allow us to follow the development of the *hoi epêlt^{h}e ptareîn* ICs.

In order to describe the diachronic development of ICs, two corpora were established: an HG corpus, including *Iliad* and *Odyssey*, and a CG corpus, including the works of Herodotus, Thucydides, Plato, Aristophanes, and Isocrates.

18 The verbs with a GEN-DAT IC are listed in Appendix A separately.

19 The etymology of *khrḗ* is debated, as far as questioning its nature as a verb. More in detail, cf. DELG: 1272 ff. and GEW: 1117ff.

20 Only the forms without the causative meaning of the verb *parístatai* have been analyzed: i.e., mediopassive Present, Imperfect and Future, *paréstē* Aorist, passive Aorist, and *paréstēke* Perfect.

Lemma	Personal	Impersonal
aréskei	'to make amends'	'to please'
arkeî	'to defend'	'to be enough'
armózei	'to fit together'	'to befit'
eisérkhetai	'to enter'	'to come to one's mind'
epibállei	'to throw upon'	'to be up to'
epérkhetai	'to reach'	'to come to one's mind, to feel like'
énesti	'to be in, to exist'	'to be possible'
hikneîtai	'to come'	'to befit'
katalambánei	'to seize'	'to happen'
métesti	'to be among'	'to have a share, to be able to'
páresti	'to be by'	'to be able to'
parístatai[20]	'to stand by'	'to happen, to come to one's mind'
prépei	'to be visible'	'to befit'

Table 1 The sample

The selection of the CG corpus aims at including a variety of literary genres (historiography, dialogue, oratory, and comedy) to avoid any biases related to them. As for poetry, tragedy was excluded due to the archaizing style, which might otherwise have altered the whole picture, while comedy was included because it features, to some extent, expressions from the spoken language, in the same way as dialogue does. Herodotus was chosen to include a certain degree of dialectal variation.

3.2 Data extraction and annotation

The data was extracted through the *Thesaurus Linguae Graecae* (2014) Digital Library. All occurrences of the 3rd person singular forms of the verbs listed in Table 1 were extracted and annotated. ICs can certainly occur even if the verb is in the infinitive or in the participle. However, in infinitival clauses, both the subject and the object are coded in the accusative case, resulting in the contextual neutralization of the morphological distinction of core arguments, as shown in the following example:

(4) ὀλοφυρόμενον δ᾽ ἄρα μιν ἐπελθεῖν ὕπνον

olop^{h}urómen-on *d'* *ára* *min* *epelt^{h}-eîn*
complaining-M.ACC.SG PTCL PTCL 3SG.ACC reach.AOR-INF.ACT
húpno-n
sleep(M)-ACC.SG
'while he was complaining he fell asleep' (Hdt. 2, 141)

In the example (4) both the subject of the infinitive *húpnon* and its object *min* are coded in the accusative case. Participles were also excluded for a similar reason: the very few instances of ICs in absolute participles tend to be *accusativus absolutus* (Smyth 1956: 457 §2059, 461 §2076), where the accusative subject of non-neuter nominals cannot be formally distinguished from the neuter direct case. See example (5):

(5) συνδόξαν τῷ πατρὶ καὶ τῇ μητρί [...]

sundóxa-n *tôi* *patr-ì* *kaì*
seem_good.AOR.PTC.ACT-ACC.SG DET.M.DAT.SG father(M)-DAT.SG and
têi *mētr-í* [...]
DET.F.DAT.SG mother(F)-DAT.SG
'for he had obtained the consent of his father and mother [...]' (Xen. *Cyr.* 8, 5.28)

In total, 781 occurrences (176 in HG and 605 in CG) were extracted and annotated according to the classification of construction outlined in § 4. The data is organized in Appendix B, which lists every verb in the sample, along with the frequency of occurrence for each construction (both in absolute numbers and in percentages). The overall data is then analyzed in § 5.

4 Classification of Constructions

This section provides an overview of the classification of constructions developed to annotate the data. In general, a construction is defined as a «particular combination of semantic structure and information packaging function» (Croft 2016: 380). However, in this case, a more restrictive definition is adopted: in particular, a construction here is intended as a specific argument structure revolving around a verb, where the morphological coding of arguments, their semantic properties, the syntactic relation between them and the verb, and the verbal diathesis are equally significant. On this basis, any change in at least one of the aforementioned parameters results in a different construction.

This classification of constructions is based on a prototype approach whereby ICs «can be defined in terms of departure from what can be analyzed as the canonical type of verbal predicative construction [i.e. the prototypical personal construction] in a given language» (Creissels 2019: 2). Constructions are sorted from the most personal to the most impersonal, along a *continuum*: constructions located in the middle are thus regarded as less prototypical realizations of personal (or impersonal) constructions. Argument properties are consistently analyzed in the framework of the *Role and Reference Grammar*, which allows an interface between semantic and morphosyntactic factors (Foley & Van Valin 1984, Van Valin 1993, 2005, Van Valin & Wilkins 1996, Van Valin & LaPolla 1997).

Type I construction, *i.e.* the prototypical personal construction, is defined first in its fundamental semantic (animacy, agentivity and referentiality of the subject) and morphosyntactic properties (morphological encoding of the arguments and verbal agreement). Subsequently, the other constructions located further along the *continuum* are obtained by gradually removing those definitory properties from the prototype, until only the prototypical IC is left, i.e. type V, which possesses none. In this way, constructions are subdivided according to their degree of personality, measured by the number of defining properties they share with type I construction.

4.1 Type I

Type I construction is the prototypical personal construction. Its argument structure entails, on the one hand, a nominative coded Actor, which is referential and semantically specified by the [+human] trait, and on the other hand, an accusative or dative coded Undergoer without any particular semantic restriction.[21] The nominative Actor can be properly described as the subject. Subject is a complex language-specific notion, entailing morphological, syntactic, semantic, and pragmatic properties. According to Dahl (2023: 297) and Luinetti (in prep. a), the AG subject has the following properties:

i. it is the most agentive argument;

ii. it triggers verbal agreement;

21 In this article a scalar approach to transitivity is adopted, following Hopper & Thompson (1980): in particular, semantic transitivity is separated from syntactic transitivity (cf. also Creissels 2024). In this way, every bivalent verb is considered semantically transitive, regardless of the morphosyntactic realization of the second argument. Therefore, bivalent verbs with an accusative coded second argument (*e.g.*, *apokteínō tina* 'I kill sb.') and bivalent verbs with a dative coded second argument (*e.g.*, *boēt^{h}éō tini* 'I help sb.'), are treated in the same way, as realizations of different degrees of transitivity. AG also features bivalent verbs with a genitive coded second argument (*e.g. ark^{h}éō tinos* 'I command sb.'), that are not found in the sample.

iii. it is the obligatory argument;

iv. it is the addressee of imperatives;

v. it is selected in raising and control constructions.

The meaning associated with this construction is considered the basic and non-figurative one for the verbs in the sample. Here are some examples:

(6) καταλαμβάνει μὲν [⋯] ὁ Νικόδρομος τὴν παλαιὴν καλεομένην πόλιν.

katalambán-ei	*mèn* [...]	*ho*	*Nikódromo-s*
seize.PRS-3SG.ACT	PTC	DET.M.NOM.SG	Nikodromos(M)-NOM.SG
tḕn	*palai-ḕn*	*kale-omén-ēn*	*póli-n*
DET.F.ACC.SG	old-F.ACC.SG	called-F.ACC.SG	city(F)-ACC.SG

'Nikodromos seized the so-called Old City.' (Hdt. 6, 89.1)

(7) [...] πότνια Ἥρη · / [...] ὁμεγερέεσσι δ' ἐπῆλθεν / ἀθανάτοισι θεοῖσι Διὸς δόμῳ ·

[...] *pótni-a*	*Hér-ē* · / [...]	*homegeré-essi*	*d'*
revered-F.NOM.SG	Hera(F)-NOM.SG	gathered-M.DAT.PL	PTC
epêlt^{h}en /	*at^{h}anát-oisi*	*t^{h}eoîsi*	
reach.AOR-3SG.ACT	immortal-M.DAT.PL	god(M)-DAT.PL	
Diòs	*dómōi*		
Zeus(M).GEN.SG	house(M).DAT.SG		

'Revered Hera [⋯] approached the immortal gods gathered in the house of Zeus.' (Hom. *Il.* XV, 83-85)

In example (6), the verb *katalambánō* means 'to capture' with an argument structure involving a [+human] Actor (*ho Nikódromos*) and a [-animate] Undergoer (*tḕn palaiḕn kaleoménēn pólin*).[22] The verb *epérk^{h}omai*, in example (7), retains its concrete motion meaning, while having in its argument structure a god as an Actor (*pótnia Hérē*) and a group of gods as an Undergoer.

In this type some monovalent verbs with a [+human] only argument are also included, as shown in example (8) by *prépō*, which has the base meaning 'to be preeminent' in combination with a [+human] argument (*ptōk^{h}ós*).

(8) ἦλθε δ' ἐπὶ πτωχὸς πανδήμιος, [...] / μετὰ δ' ἔπρεπε γαστέρι μάργῃ.

22 The verb *katalambánō* is attested in Homer only in *tmesis*: with the concrete meaning of 'to capture', cf. Hom. *Od.* IX, 433.

êlth-e *d'* *epì* *ptōk^{h}ò-s* *pandèmi-os* [...] /
arrive.AOR-3SG.ACT PTC upon beggar(M)-NOM.SG public-M.NOM.SG
metà *d'* *éprep-e* *gastér-i*
among PTC be_distinguished.IPF-3SG.ACT belly(F)-DAT.SG
márg-ēi
greedy-F.DAT.SG
'There came up a public beggar, [...] and he was known for his greedy belly.' (Hom. *Od.* XVIII, 1-2)

Constructions whose Actor designates a group of people were also included under type I (*e.g.*, *hoi* [...] *epêlt^{h}e Skuthéōn stratòs mégas* (Hdt. 1, 103.3) 'he was reached by a great army of Scythians').

4.2 Type II

Type II construction is a less prototypical personal construction. Its argument structure entails a nominative-coded Actor with the [-animate] semantic trait, and an accusative or dative-coded Undergoer with the [+human] trait. In this kind of construction, an object or a non-human entity performs an action which would usually be performed by a human: for this reason, the meaning of the verb occurring with this construction tends to shift towards a figurative one. The figurative reading of the verb is also promoted by the fact that, in most cases, the inanimate Actor is some kind of sensation or experience related to the [+human] Undergoer.[23] Monovalent constructions with a [-animate] only argument whose referent is a natural phenomenon, have been included under type II (*e.g.*, *plēmurìs* 'tide' in *epêlt^{h}e plēmurìs tês t^{h}alássēs megálē* (Hdt. 8, 129) 'there came a great high tide of the sea'). Since the gender of the Actor influences the alignment pattern, as shown in § 2, type II constructions are further subdivided into type II.a and type II.b.

4.2.1 Type II.a

In this subtype the Actor is of masculine or feminine gender, thus there is no syntactic deviation from the norm. Here are some examples:

(9) Ἄργον δ' αὖ κατὰ μοῖρ' ἔλαβεν μέλανος θανατοῖο.

23 It should be noted that in type II constructions the Stimulus can be further explained by an epexegetic clause, as can be seen in the following example, where the infinitive clause specifies the cause of the *t^{h}ôma* 'surprise': *oudén moi t^{h}ôma parístatai prodoûnai tà hréet^{h}ra tôn potamôn ésti hôn* 'I'm not surprised that the streams of some river got dry.' (Hdt. 7, 187.2).

Árgono-n *d'* *aû* *katà* *moîr'*
Argos(M)-ACC.SG PTC PTC down destiny(F).NOM.SG
élab-en *mélan-os* *t^{h}anat-oîo*
catch.AOR-3SG.ACT black-M.GEN.SG death(M)-GEN.SG
'As for Argos, the destiny of black death seized him.' (Hom. *Od.* XVII, 326)

(10) τόσσα μιν ὁρμαίνουσαν ἐπήλυθε νήδυμος ὕπνος.

tóssa *min* *ormaínous-an* *epēlut^{h}-e*
such_thing.DIR.PL 3SG.ACC pondering-F.ACC.SG reach.AOR-3SG.ACT
nēdum-os *húpno-s*
sweet-M.NOM.SG sleep(M)-NOM.SG
'So many things was she pondering when sweet sleep came upon her.' (Hom. *Od.* IV, 793)

As can be seen from (9), unlike (7), the verb *katalambánō* is used in a metaphorical sense to express the death of Argos, who is depicted as an Undergoer, while 'destiny of death' is somewhat personified as an entity capable of seizing somebody.[24] The same metaphorical shift can be seen in (10), where the verb *eperk^{h}omai* does not entail an actual change of place, as in (6), yet expresses the arising of the desire to sleep (also, *nēdumos húpnos*: Hom. *Od.* XII, 311; *glukeròs húpnos*: Hom. *Od.* III, 472). The same verb is attested in Homer in metaphorical expressions also involving the rise of an illness (*noûsos*: Hom. *Od.* XI, 200) or the arrival of the night (*nùx erebennḗ*: Hom. *Il.* VIII, 488; Hom. *Il.* IX, 474). [25]

24 On other metaphorical uses of *lambánō* in Homer, as an experiential verb, cf. Benedetti (2013: 126).

25 In HG, many other verbs are used with a metaphorical meaning in order to express some experiential situations: *e.g.*, *hiknéomai* 'come' with *pént^{h}os* 'sorrow' (Hom. *Il.* I, 362; XVIII, 64, 73; XXIV, 708; Hom. *Od.* XXIII, 224), *hádos* 'satiety' (Hom. *Il.* XI, 88), *álgos* 'pain' (Hom. *Od.* XV, 345), *limós* 'hunger' (Hom *Il.* XIX, 348, 354); *eisérk^{h}omai* 'reach' with *ménos* 'might' (Hom. *Il.* XVII, 157), *peínē* 'hunger' (Hom. *Od.* XV, 407); *parístamai* 'stand by' with *t^{h}ánatos* 'death' (Hom. *Il.* XVI, 853), *aísimon êmar* 'fatal day' (Hom. *Od.* XVI, 280); *epilambánō* 'take' with *glukùs húpnos* 'sweet sleep' (Hom. *Od.* X, 31; Hom. *Il.* XIII, 282); *epilambánō* 'seize' with *porp^{h}úreos t^{h}ánatos kaì moîra krataiḗ* 'dark death and mighty destiny' (Hom. *Il.* V, 83; XVI, 333; XX, 476), *pén^{h}os ásk^{h}eton* 'unbearable sorrow' (Hom. *Il.* XVI, 548), *kámatos* 'toil' (Hom. *Od.* I, 192). On the expression of experiential situations in HG cf. Luraghi (2020). These expressions may also be analyzed as support-verb constructions (cf. Fendel 2024).

4.2.2 Type II.b

This subtype has a neuter Actor. Neuter nouns follow the neutral alignment pattern and do not trigger number agreement with the verb, as can be seen in the following examples:

(11) τί δέ σε φρένας ἵκετο πένθος;

tí	*dé*	*se*	*p^{h}rén-as*	*hík-eto*
what.N.DIR.SG	PTC	2SG.ACC	mind(F)-ACC.PL	reach.AOR-3SG.MID
pént^{h}o-s				
sorrow(N)-DIR.SG				

'What sorrow came to your mind?' (Hom. *Il.* III, 362)

(12) ταῦτα δὲ γινόμενα πένθεα μεγάλα τοὺς Αἰγυπτίους καταλαμβάνει.

taûta	*dè*	*ginómen-a*	*pént^{h}e-a*
this.N.DIR.PL	PTC	happening-N.DIR.PL	sorrow(N)-DIR.PL
megál-a	*toùs*	*Aiguptí-ous*	*katalambán-ei*
great-N.DIR.PL	DET.M.ACC.PL	Egyptian(M)-ACC.PL	catch.PRS-3SG.ACT

'When this happens, there is great mourning among Egyptians' (Hdt. 2, 66.4)

Example (11) is an instance of neutral alignment (cf. § 2) by the neuter noun *pént^{h}os* 'sorrow'. Despite the morphological neutralization, the subject function of *pént^{h}os* is preserved: however, it can be inferred only from the context, in particular by the accusative marking of *se* and *p^{h}rénas*, which excludes the presence of another direct object in the same argument structure. Moreover, in (12) it can be seen that neuter nouns do not trigger number agreement with the verb: indeed, the plural *pént^{h}ea megála* is not cross-referenced with the singular form *katalambánei*.[26] Therefore, with type II.b constructions it can be noted that two typical subject properties of the prototypical, nominative-marked argument seen in type I constructions are lost: the morphological distinction between nominative and accusative case, and agreement with the verb. Type II.b constructions are thus less prototypical personal constructions than type II.a.

26 It should be noted that the expression *taûta dè ginómena* is better understood from the context as an accusative absolute: thus, despite being coded in the direct case as well, it is independent of the neuter Actor *pént^{h}ea megála*.

4.3 Type III

The argument structure of type III construction involves a neuter pronoun coded in the direct case as the Actor, and an accusative or dative coded [+human] Undergoer. This type is distinct from type II.b due to the criterion of referentiality, since neuter pronouns can refer both to entities and to events: in some instances, it is impossible to determine *a priori* whether the pronoun refers to one or the other (*e.g.*, in the hypothetical context *tí se katalambánei;* 'what happens to you?' one could not say with any certainty if the pronoun *tí* refers to an entity, or to an event). For this reason, all constructions involving neuter pronouns are treated alike. The meaning of the verb associated with this construction is, in most cases, figurative. Let us consider some examples:

(13) ἡμῖν οὖν εἰσῆλθέ τι τοιοῦτον [...] πειραθῆναι συλλαβεῖν εἰς ἕν [...].

hēmîn *oûn* *eisêlt^h-é* *ti* *toioûton* [...]
1PL.DAT PTC reach.AOR-3SG.ACT something.N.DIR.SG such.N.DIR.SG
peirat^{h}ê-nai *sullab-eîn* *eis* *hén* [...]
try.AOR-INF.ACT collect.AOR-INF.ACT to one.N.DIR.SG
'It came to our mind something like this [...] to try to collect them together' (Plato, *Theaet*. 147d)

(14) εἰ μὴ κατελάμβανε τοὺς αἰελούρους τοιάδε · ἐπεὰν [...]

ei *mḕ* *katelámban-e* *toùs* *aieloúrous* *toiáde.*
if NEG catch.IPF-3SG.ACT DET.M.ACC.PL cat(M).ACC.PL this.N.DIR.PL
epeàn [...]
whenever
'If this were not to happen to the cats: whenever [...].' (Hdt. 2, 66.1)

In example (13), the verb *eisérk^{h}omai*, originally meaning 'to reach', completely changes its meaning to 'to come to one's mind', when a neuter pronoun (*ti toioûton*) occurs as an Actor in its argument structure. Something similar happens to *katalambánō* in (14), which shifts its meaning from 'to seize' to 'to happen', with *toiáde* as an Actor. Exactly as with neuter nouns, neuter pronouns also instantiate the neutral alignment pattern, since they share a syncretic form for nominative and accusative cases, and they do not trigger verbal agreement, as can be seen in (14). Again, despite the formal neutralization, functions can be inferred from the context. Moreover, as already mentioned, neuter pronouns can refer not only to entities but also to events: for instance,

in (13), the pronoun *ti toioûton* refers cataphorically to a subsequent noun clause portraying an event; in example (14), again, *toiáde* has a cataphorical function, referring not to a single entity, but to a sequence of events described in the following sentences – in this case, it refers to the fact that male cats would allegedly kill females' offsprings in order to make them receptive again.[27] Sometimes, the neuter pronoun can also be related to an epexegetic noun clause, which explicitly expresses the event the pronoun refers to, as seen in (15): the neuter pronoun *toûto* is linked to the noun clause introduced by *hōs*, which describes what situation the 2nd person may have in mind. The verb *parístamai* literally means 'to stand by', but here its meaning shifts to 'to come to one's mind'.[28]

(15) εἰ δ᾽ ἄρα σοι τοῦτο παρέστηκεν, ὡς οὐχ οἷόν τε ἰσχυρὰν φιλίαν γενέσθαι ἐὰν μή τις ἐρῶν τυγχάνῃ.

ei d' ára soi toûto paréstē-ken, hōs ouk^{h}
if PTC PTC 2SG.DAT this.N.DIR.SG stand_by.PF-3SG.ACT CPL NEG
hoîon te isk^{h}ur-àn p^{h}ilía-n gen-ést^{h}ai eàn mè̀
possible firm-F.ACC.SG friendship(F)-ACC.SG be.AOR-INF if NEG
tis erôn tugk^{h}án-ēi
someone.NOM.SG loving.M.NOM.SG happen.PRS-SBJ.3SG.ACT
'If you had in your mind this, that there cannot be a firm friendship, unless one happens to be in love.' (Plato, *Phaed.* 233c)

In type III constructions another subject property is lost, in addition to those already lost in type II.b: namely, the referentiality to an entity, since neuter pronouns can also refer to (sequences of) events. Type III constructions are thus less prototypical personal constructions than type II ones. The occurrences involving neuter relative pronouns as Actors were also included in type III constructions, as they were analyzed as neuter pronouns with an entity as a referent.

27 '[···] if this weren't to happen to the cats: whenever the females have a litter, they are no more receptive to the males: these thus, seeking the females, cannot have intercourses with them. In front of this situation, they play this trick: they steal the offsprings from the females, and having abducted them, they kill them – yet they do not eat them. The females, deprived of their offsprings, desire other ones, so that they come back to the males: it is indeed a species which loves offsprings.' (Hdt. 2, 66.1–2).

28 Here is provided an example of the concrete meaning of *parístamai*, associated with a type I construction: [···] *T^{h}ersítēs: tôi d' ôka parístato dîos Odússeus* '[...] Thersites: but to his side quickly came godlike Odysseus.' (Hom. *Il.* II, 244).

4.4 *Type IV*

The argument structure of type IV construction selects an infinitive preceded by a neuter direct article as an Actor, and an optional accusative or dative coded [+human] Undergoer. The meaning of the verb associated with this construction is always figurative. Not every verb in the sample is attested with type IV construction. Here is an example:

(16) ἢ ἀρκεῖ ὑμῖν τὸ ἡδέως καταβιῶναι τὸν βίον ἄνευ λυπῶν;

ḕ	*arkeî*	*humîn*	*tò*	*hēdéōs*
or	be_enough.PRS.3SG.ACT	2PL.DAT	DET.N.DIR.SG	pleasantly
katabiô-nai	*tòn*	*bí-on*	*áneu*	
live.AOR-INF.ACT	DET.M.ACC.SG	life(M)-ACC.SG	without	
lup-ôn				
suffering(F)-GEN.PL				

'Or it is enough for you to pass your life pleasantly without sufferings?'

In (16) the article *tó* nominalizes the infinitive *katabiônai* with all its arguments and modifiers, thus enabling the entire event described by the verb to occur as the nominal Actor of the verb *arkeî*. The meaning of *arkeî* 'to be enough' stems from its original meaning 'to defend'.[29] The categories expressed by nominal morphology are entirely borne by the article *tó*, which nominalizes the infinitive. With type IV construction, another subject property is lost: the synthetic expression of nominal categories.

4.5 *Type V*

Type V construction, i.e. *hoi epêlt^{h}e ptareîn* IC is located at the opposite pole of the *continuum*. The argument structure of this kind of construction comprises a noun clause as a Stimulus (corresponding to the Actor in the previous constructions), and, optionally, an accusative or dative coded [+human] Experiencer (corresponding to the Undergoer in the previous constructions).[30]

29 The verb *arkeō* occurs with its original meaning in the following example, included in type II.a construction: [...] *pukinòs dé hoi ērkese t^{h}ṓrēx*. '[...] the firm corslet defended him.' (Hom. *Il.* XV, 326).

30 The treatment of a noun clause as an Actor may sound odd to the reader but, given that it is a full-fledged argument of the verb, it is perfectly compatible with the RRG framework. For a similar approach, cf. Danesi et al. (2018).

It is significant that both the Experiencer and the Stimulus are located midway in the Actor-Undergoer continuum (cf. Van Valin & LaPolla 1997: 127, 146). Therefore, they can be seen either as non-prototypical Actors or as non-prototypical Undergoers. The meaning of the verb associated with this construction is always figurative (in particular, it can denote an experience, a happenstance, a necessity or a possibility). Here are some examples:

(17) καί οἱ ταῦτα διέποντι ἐπῆλθε πταρεῖν τε καὶ βῆξαι μεζόνως ἢ ὡς ἐώθε-ε.

kaì *hoi* *taûta* *diépont-i* *epêlt^{h}-e*
and 3SG.DAT this.N.DIR.PL following.DAT.SG reach.AOR-3SG.ACT
ptar-eîn *te kaì* *bêx-ai* *mezónōs* *é* *hōs*
sneeze.AOR-INF.ACT and cough.AOR-INF.ACT more than CPL
eőt^{h}e-e
be_accustomed.PPF-3SG.ACT
'And dealing with this he happened to sneeze and cough more than he used to.' (Hdt. 6, 107.3)

(18) Στησαγόρεα κατέλαβε ἀποθανεῖν ἄπαιδα.

Stēsagóre-a *katélab-e* *apot^{h}an-eîn*
Stesagoras(M)-ACC.SG catch.AOR-3SG.ACT die.AOR-INF
ápaid-a
childless-M.ACC.SG
'Stresagoras happened to die childless.' (Hdt. 6, 38.2)

In (17), the argument structure of the verb *epérk^{h}omai* has a dative marked Undergoer (*hoi*) and no nominative-marked noun or pronoun: since there is nothing that can be cross-referenced with the verb, it appears in a generic 3rd person singular form. The Stimulus slot is filled with a noun clause, in this case an infinitive clause: the first argument of the infinitive is coreferential with the dative Experiencer of the governing clause.[31] The meaning of the verb *epérk^{h}omai* shifts from 'to reach' to 'to happen'. A similar construction is seen in (18), where an infinitive clause is the Stimulus and the accusative-coded *Stēsagórea* is the Experiencer. Also in this case, the meaning of *katalambánō* shifts from 'to catch' to 'to happen'. In type V constructions, the Stimulus

31 This it is not meant to claim that the Undergoer of the governing clause *is* the subject of the dependent infinitive: it should just be observed that the Undergoer of the governing clause and the subject of the infinitive share the same referent. This topic will be addressed in another paper (Luinetti in prep. a).

may also be an explicit noun clause (19) or an adverbial clause (20), as in the following examples:

(19) τὸν δὲ ἀκούσαντα ἐσῆλθε αὐτίκα ὡς εἴη τέρας καὶ φέροι ἐς μέγα τι.

tòn *dè* *akoúsant-a* *esêlt^{h}-e* *autíka*
DET.M.ACC.SG PTC listening-M.ACC.SG reach.AOR-3SG.ACT at_once
hōs *eíē* *téras* *kaì* *p^{h}ér-oi*
CPL be.OPT.3SG portent(N).DIR.SG and bring-OPT.3SG.ACT
méga *ti*
big.N.DIR.SG something.N.DIR.SG
'While he was listening, at once it came to his mind that it could be a portent and it could bring to something great.' (Hdt. 8, 137.3)

(20) εἰπὲ πότερον ἀρέσκει σοι ᾗ λέγει Σωκράτης περὶ ὀνομάτων.

eip-è *póteron* *arésk-ei* *soi* *hêi*
tell.AOR-IMP.2SG.ACT if like.PRS-3SG.ACT 2SG.DAT how
lég-ei *Sōkrátē-s* *perì* *onomátōn*
speak.PRS-3SG.ACT Socrates(M)-NOM.SG about name(N).GEN.PL
'Tell if you like how Socrates is speaking about names.' (Plato, Crat. 427e)

In example (19) the noun clause that acts as a Stimulus is introduced by the complementizer *hōs* (*hóti*, *ei* or an interrogative particle are also possible), which introduces two verbs with an overt personal marking (*eíē* and *p^{h}éroi*). Here again, the verb *eisérk^{h}omai*, originally meaning 'to reach', shifts its meaning to 'to come to one's mind'. Lastly, example (20) shows that an adverbial clause can also act as a Stimulus. Usually, such clauses are introduced by adverbial relative expressions with an elliptical pronominal antecedent, such as *êi* 'how, the way in which' or *hópōs* 'how'. Here, the verb *aréskō* means 'to please', while its original meaning, found only in HG, is 'to make amends'.[32]

In type V constructions, the noun clause does not have any of the morphological markers typical of nouns. Therefore, it has no morphological means to express which place it takes in the argument structure of the verb, neither

32 Here an example of a personal construction with a concrete meaning of *aréskō* is provided (this verb is attested in HG as a *medium tantum*): *Eurúalos dé he autòn aressást^{h}ō epéessi / kaì dṓrōi* [...]. 'Let Euryalos make amends directly to him with words and with a gift [...].' (Hom. *Od.* VIII, 396-397).

can it trigger any cross-reference with the governing verb, which is generically marked for the 3rd person singular.

Finally, one of the arguments of type V constructions is sometimes omitted because it is directly inferable from context. Since argument omission is allowed by AG for both arguments, as long as they are clear from the context (Smyth 1956: §931, §937, §1599), these types of constructions are treated exactly as type V constructions, and are not considered separately in the data collection. Here are some examples:

(21) ἀλλ' οὐ γὰρ ἐν τῷ τοιῷδε τάξιος εἵνεκα στασιάζειν πρέπει

all' *ou* *gàr* *en* *tôi* *toiôide* *táxi-os* *heíneka*
but NEG PTCL in DET such.M.DAT.SG order(F)-GEN.SG for
stadiáz-ein *prép-ei*
wrangle.PRS-INF.ACT befit.PRS-3SG.ACT

'this is no time for wrangling about our place in the battle. (Hdt. 9, 27.6)

(22) ταῦτα εἰπαντος Πρηξάσπεος, ἤρεσε γὰρ Καμβύσῃ, [...].

taûta *eíp-ant-os* *Prēxáspe-os*
this.N.DIR.PL speak.AOR-PTCP-M.GEN.SG Prexaspes(M)-GEN.SG
ḗres-e *gàr* *Kambúsēi*
like.AOR-3SG.ACT PTC Cambyses(M).DAT.SG

'Prexaspes having thus spoken, Cambyses was pleased, [...].' (Hdt. 3, 63.1)

In example (21) the Experiencer argument is omitted: the verb *prépei* has an IC and a monovalent argument structure, in which the only argument is a noun clause. However, it is possible to infer from the context that the person to whom 'it does not befit' is the speaker. The omission of the Stimulus from the argument structure can be seen as a pragmatic strategy aimed at demoting it to a background function, since it is not perceived as relevant to the informational content of the utterance.[33] While the Experiencer is omitted most frequently in ICs that express necessity and possibility, it is seldom omitted in ICs denoting happenstance, and almost never omitted in ICs with experiential meaning. In example (22) the noun clause Stimulus is omitted:

33 This would be an analogous to passive impersonals as an agent-demoting strategy (Malchukov & Siewierska 2011: 2).

the verb *aréskō* has a monovalent IC, whose only argument is the Experiencer *Kambúsēi*. In this case, the Stimulus can be understood to be the situation expressed by the *genitivus absolutus*: there is no overt anaphoric reference to it, yet it is clearly inferable from the context.

4.6 Summary

A summary Table (2) with the morphosyntactic and semantic characteristics of each construction is provided below:

	I	II.a	II.b	III	IV	V
ACTOR	NOM	NOM	DIR	DIR	*tò* + INF	NCL
alignment	NOM-ACC	NOM-ACC	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
[human]	±	-	-	-	-	-
referentiality	+	+	+	±	-	-
meaning	B	B/F	B/F	F	F	F

B: basic meaning, F: figurative menaing

Table 2 Features of the constructions

The constructions are ordered following the *continuum* of (im)personality. The double line demarks the full transition to an IC. Each construction is checked for the following parameters: morphological encoding of the Actor, system of alignment, presence of the [+human] trait for the Actor, referentiality of the Actor, and figurative meaning of the verb. Reading from left to right, constructions are decreasingly personal, and the Actor undergoes a cumulative loss of subject properties. The first property to be lost by the Actor is the [+human] trait, which separates type I constructions from the others. Next, the Actor loses the dedicated morphological encoding in the nominative case and the agreement with the verb starting from type II.b constructions, where neutral alignment takes place. From type III construction on, the referentiality of the Actor is no longer required. Then, the morphological encoding of the Actor becomes analytic starting from type IV construction, where it is expressed by the neuter article, before disappearing completely in type V construction, where the Actor (i.e. the Stimulus) consists of a noun clause. Moreover, the verb has a basic meaning (B) in type I to type II.b constructions, but starts to be used with a figurative meaning (F), that is often experiential, from type II.a construction, and from type III construction on the figurative meaning is the only one possible.

At this point, if the personal-impersonal *continuum* has been properly segmented according to the defining properties of ICs, we expect the development of new ICs in AG to be mirrored by an increase in the frequency of the

rightmost constructions in the table.

5 Distribution of constructions

The data collected from the thirteen verbs in the sample is presented in the following tables in terms of types and tokens. Table 3 gives the number of lexemes attested with each construction (considered as types), while Table 4 shows how many occurrences of each construction of the thirteen verbs (considered as tokens) are attested in HG and CG. The data collected for each single verb is stored in Appendix B.

	I	II.a	II.b	III	IV	V
HG	12	8	7	1	-	-
	42.9%	28.6	25.0%	3.6%	-	-
CG	11	11	11	12	4	13
	17.7%	17.7%	17.7%	19.4%	6.5%	21.0%
Δ	-25.1%	-10.8%	-7.3%	15.8%	6.5%	21.0%

Table 3 Type frequency of constructions

	I	II.a	II.b	III	IV	V	tot.
HG	126	31	17	2	-	-	176
	71.6%	17.6%	9.7%	1.1%	-	-	
CG	216	72	55	66	6	190	605
	-35.9%	-5.7%	-0.6%	9.8%	1.0%	31.4%	
Δ	-35.9%	-5.7%	-0.6%	9.8%	1.0%	31.4%	

Table 4 Token frequency of constructions

The Δ line signals the difference between the frequency of the constructions in HG and CG: thus, positive values signify an increase in the frequency of a given construction, while negative values signify a decrease. The data from the tables is represented in the charts in Figure 1.

It is well known that, compared to token frequency, type frequency reduces the differences between construction types overall. However, the two charts show slightly different dimensions: type frequency shows the productivity of each construction (as intended in Goldberg & Stuttle 2011), i.e. how much it can be extended to new lexemes, while token frequency shows the frequency of use of each construction, i.e. how often it occurs in a text (more

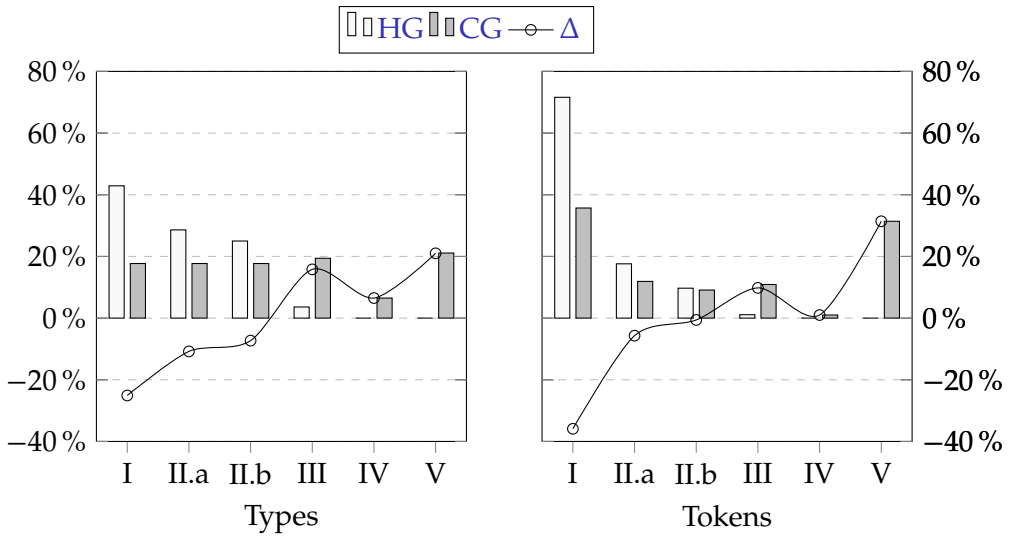

Figure 1 Distribution of constructions

in detail, cf. Levshina 2021, Berg 2014).[34]

The analysis in terms of tokens is undoubtedly biased by the formulaic nature of the Homeric text. For instance, the verb *arkeî* occurs ten times overall, but eight occurrences are found in three formulas: two occurrences of *apò k^{h}roòs ērkes' ólet^{h}ron* (Hom. *Il.* XV, 543 and Hom. *Il.* XIII 440 with the metrically equivalent variant *érkei*), three occurrences of *érkese lugròn ólet^{h}ron* (Hom. *Il.* IV, 292, Hom. *Il.* VI, 16, and Hom. *Il.* XX, 289), and three occurrences of *érkese t^{h}órēx* (Hom. *Il.* XIII, 371, Hom. *Il.* XIII, 397, and Hom. *Il.* XV, 529). However, the trend of HG tokens does not contrast with the trend of HG types. Since there is no reason for which either a personal or an impersonal construction should be specifically overrepresented in formulas, their effect can be considered random for the sake of this analysis.

The charts show that in HG only type I, II and III constructions are represented, while type IV and V appear for the first time in CG. Moreover, type III construction, despite occurring in HG, has a very scarce rate, representing only 3.6% of the types overall and 1.1% of the tokens. Type I construction, which is the prototype of the personal construction, has the highest rates,

34 In particular, according to Taylor (2002), high type frequency encourages the creation of schemas and translates into lexical enrichment in diachrony.

accounting for almost three quarters of the total occurrences and being available for twelve out of thirteen lexemes. The remaining quarter consists almost entirely of type II constructions, which are found for seven and eight out of thirteen lexemes: furthermore, type II.a construction, having a masculine or feminine Actor, is almost twice as frequent as type II.b, having a neuter Actor. Undoubtedly, HG has a strong preference for personal constructions: more precisely, there is a preference for those constructions where the Actor has most of the morphosyntactic subject properties. This may be the reason why type II.b construction, where neutral alignment takes place for the Actor, remains quite scarce, albeit not absent.

Moving to CG, two constructions are most frequent in terms of tokens: type I and type V. This may be related to the fact that they represent the prototypes of the personal and impersonal construction respectively. Together, they make up two thirds of total occurrences, while the remaining third consists of the various deviations from the prototypes. Type IV construction is the least frequent: for this reason, it is likely that it is a marginal type, not necessarily connected with the development of type V ICs. As for type frequency, in CG type V is the most represented, occurring with all thirteen lexemes; types I, II and III are highly represented, with eleven out of thirteen lexemes each, while type IV is only found for sic out of thirteen lexemes.

Another interesting result is shown by the Δ line. The numbers on the line represent the difference between CG and HG percentages of each construction. Therefore, the Δ line represents the variation in the functional weight of each construction throughout diachrony: in other words, it shows how much the rate of occurrence of each construction increases or decreases from HG to CG. As far as token frequency is concerned, the Δ line lies in the negative domain for type I, in the positive domain for type III and V and floats around zero for type II.a, II.b and IV. This means that type V construction shows the most significant increase in frequency, directly followed by type III. The negative value associated with type I does not imply loss of productivity: conversely, type I still remains the most frequently employed construction in CG on average for the verbs considered. The negative value simply signals a redistribution of the functional domain among constructions: while in HG most of the functional domain is occupied by type I, in CG there is an almost equal distribution between types I and V, which necessarily results from a partial loss of functional domain by type I.

There is also a noteworthy increase in correspondence of type III in CG, confirming the hypothesis that if the functional domain of ICs expands in CG, constructions on the right side of Table 2 should increase in frequency. Looking at type frequency, the Δ line retains similar values overall, signaling

	EXPERIENCER	VERB	SUBJECT	
type III	[DAT/ACC]	*eisérk^{h}etai*	*toûto*	[INF]
	[DAT/ACC]	*eisérk^{h}etai*		[INF]
type V	[DAT/ACC]	*eisérk^{h}etai*	[INF]	

Table 5 The bridging context

that the variation in productivity of the constructions follows the variation in their occurrence rate: the main difference is that types II.a and II.b have a greater decrease in productivity than in frequency, unlike type III, which has a greater increase in productivity than in frequency. Hence it is likely that specifically type III acts as the bridging context allowing the impersonal construction to emerge.

5.1 The bridging context

Not only does quantitative data pinpoint the possible bridging context role of type III construction, but so do its morphosyntactic and semantic features. First of all, several subject properties of the prototypical personal construction are neutralized in type III construction. On the morphosyntactic level, neither is there a dedicated morphological encoding for the subject, since the direct case can function either as a subject or as an object, nor is there number agreement between the subject and the verb, which always stands in the 3rd person singular. Two of the major morphosyntactic bonds between the subject and the verb are thus severed. As a result, there is no extra formal bond between the verb and its neuter pronoun subject in type III construction compared to those found between the verb and the subject infinitive in ICs. Moreover, on the semantic level, the referentiality of the subject is no longer a required feature for type III constructions, as neuter pronouns can refer to events expressed by entire clauses. In a hypothetic context where the neuter pronoun subject of a type III construction refers to an event expressed by an infinitive – in the same way as it is seen in example (13) –, if the neuter pronoun is dropped, the subject function left vacant is undertaken by the infinitive. A representation of this pattern is given in Table 5, where the generic neuter pronoun *toûto* 'this' and the verb *eisérk^{h}etai* 'it occurs to one's mind' are used to exemplify.

In the sample, the verb with the highest rate of occurrence of type III con-

struction in CG is the verb *aréskei* 'to like', with 18 tokens (the average for CG is 5.08 and the median is 3). For this reason, this verb may have served as a model for the extension of the construction to the other verbs of the sample, as well as the other eight verbs, excluded from the current analysis, that already have an IC in HG (*handánei*, *ep^{h}andánei*, *deî*, *eíkei*, *éoike*, *epéoike*, *mélei*, and *khrḗ*). Clearly, the data from these eight verbs would offer a more complete picture of the process of expansion of ICs. However, they require a separate thorough analysis.

Overall, the verbs of the sample show that there is an expansion of the functional domain of type V and type III constructions throughout diachrony, both in terms of frequency of use and productivity. Finally, even though the frequency of type III construction is quite scarce in HG, its attestation suggests that the impersonalization process had already started, to some extent, in Homer: the morphosyntactic context found in type III construction, in fact, is the same required for a noun clause to occur in the Actor argument slot.

5.2 Lexeme-specific features

Some verbs in the sample have peculiarities that require further discussion. The verb *aréskei* is found in HG exclusively with the Aorist stem, and almost all its occurrences have middle endings –which, however, do not alter its valency –, with the meaning 'to appease'; in CG it occurs far more often with active endings with the meaning 'to please', while with mediopassive endings it acquires the meaning 'to like'.[35] Neither of the verbs *armózei* and *hikneîtai* show occurrences of type V constructions with both explicit arguments in our corpus, i.e. they occur with exclusively a dative Experiencer, or with a noun clause; in general, it seems that, among the verbs collected in Appendix A, impersonal verbs meaning 'to befit' are less likely to have an overt Experiencer. The verb *prépei* is the only not found with the type I construction in CG in the corpus, yet it still retains type II and III constructions, which are less prototypical personal constructions. Some verbs occur in ICs only in some authors in the corpus: *armózei* has all its ICs in Plato, and *hikneîtai* and *katalambánei* occur with an IC only in Herodotus.[36]

6 Conclusion

This paper addresses the expansion of *hoi epêlt^{h}e ptareîn* ICs, a particular IC in AG, with an argument structure comprising a dative or accusative-coded

35 On the diachrony of the constructions of *aréskei* cf. also Luraghi (2022).

36 This may be related to the single authors' idiolect, since the verbs involved always have a synonym: *armózei* and *hikneîtai* both signify 'to befit', and *katalambánei* has *sumbaínei* as a synonym.

argument and a noun clause. First, the effective increase of ICs in CG noted by traditional grammars is confirmed, and a quantitative base of data is provided. Consequently, as far as AG is concerned, the position according to which ICs in IE languages are a relic of the semantic alignment of the proto-language, and as such they are gradually lost following a common trend (cf. Bauer 2000, 2013, Cuzzolin 2006, 2012), should be revised, as also noted by Viti (2017: 401, 2014: 74) for other reasons: data from AG never show a decrease in the productivity of ICs.

It is shown that the expansion of ICs takes place both in terms of productivity, since ICs progressively become available for an increasing number of lexemes, and in terms of frequency. It is argued that the development of the IC from a personal construction takes place thanks to the simultaneous occurrence of some morphosyntactic and semantic factors in a bridging construction (i.e. type III) involving a neuter pronoun, which follows the neutral alignment, as a subject. On a morphosyntactic level, the distinction between the nominative and accusative case is formally neutralized in the direct case and the agreement with the verb is lost; on a semantic level, neuter pronouns can now refer to an event while the verb, lacking a [+human] and [+agentive] Actor, shifts towards a figurative, usually experiential meaning. Thus, an IC that already existed in HG expands its functional domain to a wider class of verbs.

7 Appendix A

Table 6 contains all the verbs that occur in HG and/or in CG with a DAT/ACC-NCL IC. Table 7 contains all the verbs that occur in CG with a DAT-GEN IC (such a construction is not attested in HG). The verbs are ordered alphabetically by their base separated from the preverb, to gather together verbs with a similar meaning.

Lemma		Personal	Impersonal
	handánei	'to appease'	'to please'
ep^h	*andánei*	-	'to please'
	aréskei	'to make amends'	'to please'
	arkeî	'to defend'	'to be enough'
ex	*arkeî*	-	'to be enough'
kat	*arkeî*	-	'to be enough'
	armózei	'to fit together'	'to befit'
hup	*árk^{h}ei*	'to begin'	'to happen'
sum	*baínei*	'to come together'	'to happen'
epi	*bállei*	'to throw upon'	'to be up to'

Lemma		Personal	Impersonal
eg	*gígnetai*	'to be born'	'to be possible'
ek	*gígnetai*	'to be born'	'to be possible'
	deî	'to lack'	'to need'
en	*dék^{h}etai*	'to accept'	'to be possible'
	dokeî	'to imagine, to fake'	'to seem good'
apo	*dokeî*	-	'to disagree'
meta	*dokeî*	-	'to change one's mind'
sun	*dokeî*	-	'to agree'
huper	*dokeî*	-	'to agree strongly'
	eíkei	'to give way'	'to be possible'
eís	*eisi*	'to reach'	'to come to one's mind'
kat^{h}	*ḗkei*	'to come down'	'to befit'
pros	*ḗkei*	'to be at hand'	'to befit'
súg	*keitai*	'to lie together'	'to agree on'
	éoike	'to seem'	'to befit'
ep	*éoike*	'to seem'	'to befit'
eis	*érk^{h}etai*	'to enter'	'to come to one's mind'
ep	*érk^{h}etai*	'to reach'	'to come to one's mind'
en	*esti*	'to be in, to exist'	'to be possible'
mét	*esti*	'to be among'	'to have a share in'
pár	*esti*	'to be by'	'to be able to'
par	*ék^{h}ei*	'to provide'	'to be possible'
	hikneîtai	'to come'	'to befit'
par	*ístatai*	'to stand by'	'to happen'
kata	*lambánei*	'to seize'	'to happen'
	mélei	'to take care'	'to care about'
	prépei	'to be visible'	'to befit'
éx	*esti*	'to exist	'to be possible
sum	*píptei*	'to fall together'	'to happen
ek	*poieî*	'to make'	'to be possible'
em	*prépei*	'to be conspicuous'	'to befit'
epi	*prépei*	'to be conspicuous'	'to befit'
	p^{h}aínetai	'to be visible'	'to befit'
dia	*p^{h}érei*	'to bring over'	'to care'
sum	*p^{h}érei*	'to bring together'	'to be of use'
apo	*k^{h}râi*	'to be enough'	'to be enough'
ek	*k^{h}râi*	'to be enough'	'to be enough'
kata	*k^{h}râi*	'to be enough'	'to be enough'
	k^{h}rḗ	-	'one must'

Lemma		Personal	Impersonal
(*par*)*eg*	*k^{h}ōrei*	'to give room'	'to be possible'
pro	*k^{h}ōrei*	'to go forward'	'to have success'

Table 6: Verbs with a DAT/ACC-NCL IC either in HG or in CG

Lemma		Personal	Impersonal
	deî	'to lack'	'to lack'
en	*deî*	'to lack'	'to lack'
pros	*deî*	'to make amends'	'to lack'
mét	*esti*	'to be among'	'to have a share in'
el	*leípei*	'to leave behind'	'to lack'
epi	*leípei*	'to leave behind'	'to lack'
	mélei	'to take care'	'to care about'
meta	*mélei*	-	'to regret'
apo	*k^{h}râi*	'to be enough'	'to be enough'

Table 7 Verbs with a DAT-GEN IC either in HG or in CG

8 Appendix B

		I	II.a	II.b	III	IV	V	tot.
aréskei	HG	1	-	-	-	-	-	1
	CG	1	15	15	18	3	18	70
arkeî	HG	4	4	-	2	-	-	10
	CG	8	2	1	3	1	13	28
armózei	HG	3	-	-	-	-	-	3
	CG	7	5	1	1	-	9	23
epibállei	HG	2	-	-	-	-	-	2
	CG	8	1	-	1	-	1	11
eisérk^{h}etai	HG	8	2	1	-	-	-	11
	CG	23	3	1	2	-	4	33
epérk^{h}etai	HG	9	8	2	-	-	-	19
	CG	21	6	4	3	1	10	45
énesti	HG	3	1	2	-	-	-	6
	CG	70	11	8	5	-	9	103
métesti	HG	5	-	-	-	-	-	5
	CG	-	-	2	11	-	4	17
páresti	HG	6	4	4	-	-	-	14
	CG	50	9	9	10	-	21	99
hikneîtai	HG	58	4	6	-	-	-	68
	CG	4	-	-	-	-	2	6
parístatai	HG	24	3	1	-	-	-	28
	CG	4	3	2	1	-	5	15
katalambánei	HG	-	5	1	-	-	-	6
	CG	20	13	6	7	-	11	57
prépei	HG	3	-	-	-	-	-	3
	CG	-	4	6	4	1	83	98

Table 8 Raw frequencies

		I	II.a	II.b	III	IV	V
aréskei	HG	100.0	-	-	-	-	-
	CG	1.4	21.4	21.4	25.7	4.3	25.7
arkeî	HG	40.0	40.0	-	20.0	-	-
	CG	28.6	7.1	3.6	10.7	3.6	46.4
armózei	HG	100.0	-	-	-	-	-
	CG	30.4	21.7	4.3	4.3	-	39.1
epibállei	HG	100.0	-	-	-	-	-
	CG	72.7	9.1	-	9.1	-	9.1
eisérk^{h}etai	HG	72.7	18.2	9.1	-	-	-
	CG	69.7	9.1	3.0	6.1	-	12.1
epérk^{h}etai	HG	47.4	42.1	10.5	-	-	-
	CG	46.7	13.3	8.9	6.7	2.2	22.2
énesti	HG	50.0	16.7	33.3	-	-	-
	CG	68.0	10.7	7.8	4.9	-	8.7
métesti	HG	100.0	-	-	-	-	-
	CG	-	-	11.8	64.7	-	23.5
páresti	HG	42.9	28.6	28.6	-	-	-
	CG	50.5	9.1	9.1	10.1	-	21.2
hikneîtai	HG	85.3	5.9	8.8	-	-	-
	CG	66.7	-	-	-	-	33.3
parístatai	HG	85.7	10.7	3.6	-	-	-
	CG	26.7	20.0	13.3	6.7	-	33.3
katalambánei	HG	-	83.3	16.7	-	-	-
	CG	35.1	22.8	10.5	12.3	-	19.3
prépei	HG	100.0	-	-	-	-	-
	CG	-	4.1	6.1	4.1	1.0	84.7

Table 9 Percentages

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