

# Towards a chronology of the modal particles: the diachronic spread in the Ancient Greek mood system

Ezra la Roi  
(Ghent University)

## Abstract

Research on the modal particles in Ancient Greek has mostly focused on speculations on their prehistory based on Homeric Greek or generalizing about their synchronic distributions (esp. in Classical Greek). Instead, this article details the diachronic spread of the modal particles in different modal constructions from Archaic to Classical Greek. It highlights those cases where its obligatory presence resulted in a different modal meaning (e.g. counterfactual and habitual usages) and critically discusses those cases of optional presence in Archaic and Classical Greek that prescriptivist grammarians have discouraged (e.g. with the future indicative and potential optative). Focusing on innovations allows us to (re)construct a chronology of the modal particles and their diachronic role in the Ancient Greek mood system, e.g. the replacement of the counterfactual optative by the indicative and its subsequent syntactic spread, and the creation of the past habitual and generic indicative replacing the habitual and generic optative (commonly dubbed 'iterative'). Finally, it is suggested that a similar diachronic approach which distinguishes between obligatory and optional presence could clarify the distribution of the modal particles in more complex areas such as Homeric Greek or the Ancient Greek dialects.

## Keywords

modal particle; chronology; counterfactuality; habituality; mood and modality

## 1. Towards a chronology of the modal particles and their usages

If one runs into a puzzling use of the modal particle ἄν or κε(v), whether that be in Archaic or Classical Greek, looking up what the standard grammars have to say about them will more often than not complicate matters rather than solve all questions (cf. Gerö 2000: pp. 177–180). To start with the complex case of Homeric Greek, Monro (1891: p. 327) would tell you that the modal particles “are used to mark a predication as *conditional*, or made with reference to a particular or limited state of things : whereas τε shows that the meaning is *general*. Hence with the Subj. and Opt. κεν or ἄν indicates that an event holds a *definite* place in the expected course of things: in other words, κεν or ἄν points to an *actual occurrence* in the future”. The use of both the modal particles with the counterfactual<sup>1</sup> optative or indicative to refer to the counterfactual past (e.g. *Il.* 4.429 and *Od.* 9.498) immediately undermines such a generalization. Still, the idea that the modal particles have a conditional or “deictic” value like “in that case” is not only a very old idea from as early as the 1820s (see the summary in Gerö 2000: pp. 179–182) but is still entertained today in various forms (e.g. Wakker 1994: pp. 207–208; Miller 2014: p. 328). Basset (1988: p. 37) made a similar proposal when proposing that the use of the modal particle was motivated by the expression of an event in the speaker’s actuality and that ἄν was more emphatic than κε (with Chantraine 1953: pp. 211; 218). De Decker (2021a, b) endorses this outdated theory, stating that the modal particle “had deictic and emphatic value in epic Greek and was used predominantly in speeches and did not convey modal meaning” (De Decker 2021a: p. 101). Using a corpus analysis of a selection of Homeric Greek books, he concludes about the modal particle: “It is used when a *specific instance in the near future and close to the speaker and hearer is related* (in Basset’s words, close to the actualité du locuteur). This explains why almost all instances can be found in speeches and not in narrative, *and why it is not used in negative contexts, in descriptions of repeated actions* (both in the optative and the subjunctive) *and in generic and generalising statements* (where the poet preferred the so-called τε-épique).” (De Decker 2021a: pp. 170–171, my italics). This is factually incorrect: the use of the modal particles with very diverse mood usages and temporal references (e.g. for past-referring and present-referring counterfactuals, future potentialities and certainties and past-referring generic constructions) counters such a theory (see the distributional evidence discussed below). Another, probably more promising, approach has been to point to the distribution of the modal particle as explanation. For example, the Cambridge Grammar says about ἄν that “the precise function of this particle varies depending on the mood with which it is combined” (Van Emde Boas et al. 2019: p. 438) and subsequently characterizes the combinations in which it is used (Van Emde Boas et al. 2019: pp. 438–439).<sup>2</sup> Yet another approach is to provide a linguistic characterization of the modal particle in all its usage contexts, such as formalizing it as an operator of strong intensional contexts (Gerö 2000)

1 A sentence or clause is generally called counterfactual (or contrary-to-fact) when it is implied or assumed that what is said does not hold in the actual world (Declerck & Reed 2001: p. 7).

2 A similar suggestion was made by la Roi (2019: p. 62) who suggested that the modal particle ἄν had different functions dependent on the mood with which it occurred.

or a modal universal quantifier like English ‘would’ (Beck & Malamud & Osadcha 2012: p. 67), or an operator marking non-realis epistemic modality (Allan 2015).

The diachrony of the modal particles, however, is not often addressed at length, apart from some exceptions. In some standard grammars and recent works, we find comparative overviews of the modal particle and moods it combines with in Homeric versus Classical Greek (Goodwin 1889: pp. 64–75; Monro 1891: pp. 327–335; Chantraine 1953: pp. 345–350; Ruijgh 1992; Wakker 1994: pp. 205–214; Allan 2013: pp. 31–42). In other places, we instead find prescriptive remarks that could very well be obscuring a diachronic change. For example, Kühner & Gerth (1898: p. 226) stated that the modal particle should be as rule added to main clause potential optatives in Attic Greek which lack it and that occurrences with the future indicative in the main clause should be emended (Kühner & Gerth 1898: p. 209).<sup>3</sup> However, both constructions are attested without the modal particle already in Archaic Greek and there are clear examples of both constructions with the modal particle in main clauses in Classical Greek prose texts as well: Bers (1984: pp. 128–135) provides a detailed discussion of examples from both drama and prose and supporting references;<sup>4</sup> Zingg (2017) discusses examples of the future indicative with the modal particle in Isocrates which are secure on textual grounds. In fact, already Moorhouse (1946) and Raeder (1953) provided convincing collections of examples which show that the construction was also genuine in Classical Greek.

Diachronic hypotheses on the modal particles’ origins also exist (cf. De Decker 2021b: pp. 337–341 for a recent summary), especially based on a reconstructive readings of the evidence from Homeric Greek. Allan (2013: p. 41) had tentatively hypothesized that the modal particles were originally used with the future and subjunctive, then spread to the optative and ultimately to the past tense with counterfactual meaning. He also pointed out that the modal particles are limited to epistemic mood usages (Allan 2013: pp. 37–38), which seems to be in line with the distributional evidence from Archaic Greek. The modal particle occurs in epistemic main clause usages (e.g. with the potential optative<sup>5</sup> or subjunctive in assertions) and epistemic subordinate clause usages (e.g. in conditional or final subordinate clauses). Others such as Colvin (2016) have rather shown the insights that might be gleaned from etymology.<sup>6</sup> Most importantly, he suggested that ἄν

3 As noted by Bers (1984: p. 129), Stahl (1907: pp. 298–302) “the most stiff-necked opponent of the construction” in fact provides a very long list of examples from poetry and prose, which makes his argument that the construction was not genuine in Attic all the more problematic.

4 Another example of prescriptivism is discussed by Crespo (1984) who suggests textual emendations to the infinitive with the modal particle ἄν are not secure on linguistic grounds.

5 It also occurs in wishes (contra De Decker 2021a: p. 170), in so-called insubordinate wishes with ὥς ‘(o) that’ (la Roi 2021: pp. 23–26) which derive historically from subordinate clauses, see *Il.* 6.282 ὥς κέ οἱ αὐθι γαῖα χάσῃ ‘May the earth open there for him’. Yet, as suggested by la Roi (2020b), wishes are epistemic because they provide attitudes to propositions (cf. Palmer 2001: p. 134) and wishes are used with markers of epistemicity such as inferential evidential ἄρα or epistemic ἦ.

6 Another influential etymological treatment is Forbes (1958), which is partially integrated in Colvin’s proposal.

was not a relatively recent formation as many believe(d)<sup>7</sup> but an inherited particle which was retained by Attic-Ionic and Arcadian. On the other hand, the particle  $\kappa\epsilon$  would then be the result of more recent formation processes, as evidenced by its dialectal differentiation, the epic creation of the  $\kappa\epsilon\nu$  form and its connection with the Indo-European particle \**k<sup>w</sup>e*. De Decker (2021b: p. 332) on the other hand contended that no convincing etymologies can be defended.

In fact, the problematic distributions of the modal particle in the Homeric Greek has led to suggestions that an analysis of the modal value of a mood usage does not need to take into account the modal particle (Willmott 2007: p. 204; Probert 2015: p. 85). This hypothesis is, in my view, much too strong, as, for example, the innovative counterfactual indicative in main clauses is only counterfactual when used with the modal particle (except when the verb is a counterfactual modal verb, see section 2). Moreover, a pattern from Homer may be at least partially motivated by dialectal parallels, as Homer uses both  $\check{\alpha}\nu$  and  $\kappa\epsilon(\nu)$  in a similar way to some dialects in some instances and to other dialects in other instances (see section 2 and 3 below). To avoid coming up with circular explanations based on a synchronic optional presence, we therefore ought to focus on those innovative patterns where the modal particle actually has an *obligatory* presence that results in a difference in modal meaning. The innovative use of the modal particles  $\check{\alpha}\nu$  and  $\kappa\epsilon(\nu)$  with the counterfactual indicative is a case in point, as use of either is, for example, obligatory in Homeric Greek main clauses and reflects a change in the Ancient Greek mood system (see section 2.1). Using such cases, we would be on firmer ground and could establish a chronology of both the modal particle and changes in the mood system of Ancient Greek.

This paper is organized as follows. In section 2, I discuss the diachronic spread of the modal particle in the counterfactual optative and indicative (section 2.1), their distribution across clause types in Archaic Greek (section 2.2), the diffusion of the modal particle  $\check{\alpha}\nu$  in the Classical Greek mood system (section 2.3) and the chronology of habitual and generic constructions with the modal particles in Archaic, Classical and Post-Classical Greek (section 2.4). In section 3, I summarize the different diachronic patterns (i.e. obligatory versus optional) and discuss the role of the modal particle in changes of the mood system of Ancient Greek. The data for this research stems from a corpus analysis of the Iliad, Odyssey, Homeric Hymns and Hesiod for Archaic Greek, the histories by Herodotus, Thucydides and Xenophon, the tragedies by Aeschylus, Sophocles and Euripides, the comedies of Aristophanes, Plato's authentic philosophical works and the rhetoric by Lysias, Demosthenes, Isaeus and Isocrates for Classical Greek.

7 See Chantraine (1953: p. 345), Ruijgh (1992: p. 78) and Wakker (1994: p. 207) who believed that  $\check{\alpha}\nu$  was a recent formation.



as, for example, most present-referring and the only 2 future-referring counterfactual indicatives in declaratives in Classical Greek are atelic imperfects (la Roi 2022a), e.g. E. *Alc.* 295  $\kappa\acute{\alpha}\gamma\omega\ \tau' \ \acute{\alpha}\nu\ \xi\zeta\omega\nu\ \kappa\alpha\iota\ \sigma\upsilon\ \tau\omicron\nu\ \lambda\omicron\iota\pi\omicron\nu\ \chi\rho\omicron\nu\omicron\nu$  “[In that counterfactual scenario] you and I would have lived the remainder of our lives together”.

Conversely, the counterfactual optative in Homeric Greek had already extended its temporal reference to the non-past, as evidenced by a majority of non-past counterfactual reference (la Roi 2022a) versus its archaic usage for past counterfactuality (Ruijgh 1992: pp. 81–82; Wakker 1994: p. 210, note 168; pace Hettrich 1998: p. 266 who saw this usage as an innovation). In Archaic Greek, this archaic past-referring usage (occurring 18 times in declaratives) is gradually replaced by the counterfactual indicative (occurring 146 times in declaratives). In fact, the archaic past-referring usage often occurs in formulaic contexts in Homeric Greek which attest to its relative age, e.g. the *X would have died had not Y* formula can have the older counterfactual optative (e.g. *Il.* 5.311; 5.388) or the innovative indicative (e.g. *Il.* 8.90; *Od.* 24.528), or compare the narratorial counterfactual formula “you would have thought” (if you were there, which you were not). Assuming that the past-referring counterfactual optative was an innovation which was lost immediately after Archaic Greek would therefore not make much sense (pace Hettrich 1998), also because it would go against the predictions of the life cycles of counterfactuals cross-linguistically. Similarly, some older grammars and some recent scholars (pace Goodwin 1889: pp. 81–86; Schwyzer & Debrunner 1950: p. 344; Hettrich 1998: p. 267; De Decker 2015: p. 223; 2021b: p. 330) assume that the counterfactual optative and indicative had a so-called potential of the past usage, but Wakker (1994: pp. 156–166; 2006a; 2006b) has (already) convincingly shown that these usages have a counterfactual implicature in context and are only interpreted by grammarians as a “past potential” due to the absence of an explicit counterfactual conditionals (e.g. if you had been there *which you were not*, [you would have thought X]).<sup>9</sup>

Now, despite the availability of such diachronic evidence with which a chronology of the counterfactual optative and indicative has been offered by la Roi (2022a), an assessment of the modal particles in terms of chronology has not been attempted yet. Let us start with counterfactuals in main clauses in Archaic Greek. There the modal particle creates a difference in meaning because it is obligatory unless there is a counterfactual modal verb (e.g.  $\acute{\omega}\phi\epsilon\lambda(\lambda)\omicron\nu$  ‘ought to (have)/would (have), if only’ *Il.* 1.353, 9.698, or  $\kappa\acute{\epsilon}\rho\delta\iota\omicron\nu\ \eta\tilde{\iota}\epsilon\nu$  ‘it would have been better’ *Od.* 20.331) or a scalar adverb meaning

of affairs such as ‘I live at home’ and ‘I read books’ versus telic state of affairs such as ‘I walk to the shop’ and ‘I buy a loaf of bread’. For the useful distinctions between tense, aspect, temporal reference and actionality (i.e. telic vs atelic), see Bertinetto & Delfitto (2000: p. 190). A classic treatment of aspect in general linguistics is provided by Comrie (1976). Recent overviews of aspect and actionality (which is sometimes referred to as *Aktionsart* or *lexical aspect*) in Ancient Greek can be found in Napoli (2006) and Bentein (2016: pp. 29–45).

9 Against potential of the past readings of optatives in Classical Greek suggested by older literature, Wakker (2013) astutely observed that the choice of the mood is speaker-dependent. By choosing a given mood, the speaker indicates the degree to which he presents the realization of the state of affairs as probable. Crucially, this presentation may differ from reality. For instance, at *A. Ag.* 37–38 (‘yet the house itself, if it would speak ( $\epsilon\iota\ \phi\theta\omicron\gamma\gamma\eta\nu\ \lambda\acute{\alpha}\beta\omicron\iota$ ), might tell it in the clearest way’) the speaker presents the realization as possible, whereas of course in reality a house will never be able to speak.

‘almost/nearly’ such as ὀλίγου with a past tense e.g. Od. 13.37, D. 19.273.10, Ar. *Ach.* 348 or 381 (cf. Basset 1989: p. 217). As discussed in la Roi (forthcoming a), the latter is a cross-linguistically common strategy to convey a counterfactual implicature, called ‘avertive’ (Kuteva 1998; Kuteva et al. 2019). It creates a counterfactual meaning by means of a scalar implicature *almost past event=not past event* and, in contrast to canonical counterfactual structures such as counterfactual moods and modal verbs, does not change its temporal reference over time (la Roi 2022a).

In Archaic Greek, there are 40 counterfactual optatives and 148 counterfactual indicatives in declarative<sup>10</sup> main clauses. The modal particles are distributed over them as follows: with counterfactual optatives κε 29 times (73%) and ἄν 11 times (27%), with counterfactual indicatives κε 134 times (91%) and ἄν 14 times (9%). Given that the counterfactual indicative developed later than the counterfactual optatives, they could provide a window into the chronology of the modal particles, providing evolutionary statistics, as it were, in that changing distributions reveal diachronic changes. Comparing these distributions statistically does in fact show that the distribution of the modal particles with counterfactual indicatives is *significantly*<sup>11</sup> different ( $p=0.0067$ ) from the distribution that it had with the older counterfactual optatives in main clauses. This might indicate, despite the obvious synchronic flexibility of Homeric Greek modal particle usage due to competing factors such as formulaicity<sup>12</sup> and metrics, that the preference had grown to use κε rather than ἄν. These results might perhaps support Colvin’s suggestion that ἄν as an inherited particle was older, relatively speaking of course, than κε, as the innovative counterfactual indicatives prefer the synchronically more innovative κε. Yet, to also assess their relative usage in subordinate clauses with counterfactual optatives versus indicatives, we unfortunately do not have enough corpus evidence (11 times κε and 2 times ἄν<sup>13</sup> with the counterfactual indicative versus 1 time κε with the counterfactual optative). Still, in addition to synchronic competing factors, it could perhaps be significant that κε rather than ἄν had been chosen in the innovative use in example 2 of a counterfactual indicative in a dependent statement with ὥς (for which the counterfactual optative could not be used).

(2) τὸν δ’ ἡμείβετ’ ἔπειτα Γερήνιος ἱππὸτα Νέστωρ·  
 “τοιγὰρ ἐγὼ τοι, τέκνον, ἀληθέα πάντ’ ἀγορεύσω.  
 ἢ τοι μὲν τόδε κατὰς οἶται, ὥς κεν ἐτύχθη,  
 εἰ ζῶντ’ Αἴγισθον ἐνὶ μεγάροισιν ἔτετμεν  
 Ἀτρεΐδης Τροίηθεν ἰών, ξανθὸς Μενέλαος (Od. 3.253–257)

- 10 Counterfactual interrogatives are rare in Archaic Greek (la Roi 2022 records 3 instances, 1 counterfactual optative and 2 counterfactual indicatives).
- 11 These are the results of a Fischer Exact test with  $p=0,05$  being taken as statistically significant border.
- 12 For example, the Καί νύ κε(ν) formula to express *X would have had not Y* occurs twice with the older counterfactual optative, *Il.* 5.311 and 5.388 both with ἀπόλοιτο but with a variety of verbal forms with the innovative indicative, cf. *Il.* 8.90 and 11.750.
- 13 Note, however, the interesting relative clause example illustrating the historical competition between ἄν, κεν and κε: *Il.* 13.127–128 καρτεραί, ἄς οὔτ’ ἄν κεν Ἄρης ὀνόσαιτο μετελθὼν οὔτε κ’ Ἀθηναίη λαοσσόος: “so strong in might that neither Ares might have entered in and made light of them, nor yet Athene, the rouser of armies”.

‘Then the horseman, Nestor of Gerenia, answered him: “Since you ask, my child, I will tell you all the truth. You yourself have guessed how this matter would have fallen out, if Atreus’ son, fair-haired Menelaus, on his return from Troy had found Aegisthus in his halls alive.’

In sum, these evolutionary statistics for contexts where the modal particles were obligatory with a counterfactual mood seem to point to a chronology where  $\kappa\epsilon$  was preferred more at a later stage when innovative mood usages were introduced with the counterfactual indicative.<sup>14</sup> Nevertheless, we ought not forget that Homeric Greek shows a flexibility in modal particle usage especially where the modal particle is not obligatory and does not create a difference in meaning, as we also find it on rare occasions in counterfactual conditionals with the optative (e.g.  $\kappa\epsilon$  in *Od.* 19.589) or the indicative (e.g.  $\alpha\tilde{\nu}$  in *Il.* 23.526) or potential conditionals with the optative (*Il.* 2.597). Such examples attest to the fact that in Homeric Greek, linguistic variants were used for formulaic flexibility (cf. the creation of  $\kappa\epsilon\nu$ ), because Homeric Greek was in many ways a patchwork of innovative, archaic and dialectal variants (see Hackstein 2010: pp. 406–408). Focusing on those cases where the use of the modal particle obligatorily creates a different modal meaning could thus provide insights to morphosyntactic regularities.

## 2.2 Counterfactual mood, modal particles and clause type in Archaic Greek

There are morphosyntactic rules for the modal particles when used to mark counterfactuality in Archaic Greek. In Archaic (and Classical Greek, section 2.3), the modal particle was, as mentioned above, not obligatory to make an optative or indicative mood counterfactual in conditional clauses.<sup>15</sup> The same applies to counterfactual comparative clauses in Homeric Greek, because they were of a conditional nature  $\omega\varsigma \epsilon\iota$  ‘as if’ and are counterfactual without the modal particle (see *Il.* 19.17 with the counterfactual optative and *Od.* 17.366 with the counterfactual indicative). In Classical Greek, the modal particle is, however, added to counterfactual comparative clauses when the modal particle  $\alpha\tilde{\nu}$  is not preceded by a conditional (compare  $\omega\varsigma\pi\epsilon\rho\dots\alpha\tilde{\nu}$  *Is.* 12.12.2,  $\omega\varsigma\pi\epsilon\rho \alpha\tilde{\nu} \epsilon\iota$  *Pl. Prt.* 346d1 to *A. Ag.*  $\omega\varsigma\pi\epsilon\rho \epsilon\iota$ ).

14 Another potential source of support that  $\alpha\tilde{\nu}$  was, relatively speaking, older than  $\kappa\epsilon$  could be that  $\alpha\tilde{\nu}$  already in Homeric Greek might have fused with subordinating conjunctions as such compounds typically reveal older historical processes (cf. van Beek 2018). Already in Homeric Greek we find  $\epsilon\tilde{\pi}\eta\nu$  (47 times in Homer, 5 times in the Homeric Hymns and 4 times in Hesiod) and  $\epsilon\tilde{\pi}\epsilon\iota\delta\alpha\nu$  (1 time, *Il.* 13.285). We also find many cases of subordinators immediately followed by  $\alpha\tilde{\nu}$  but not edited as one subordinator yet despite being edited as such in other nearly contemporary early authors: we find  $\delta\tilde{\tau}' \alpha\tilde{\nu}$  27 times in Homer but as  $\delta\tilde{\tau}\alpha\nu$  in *h.Hom.* 3.150, Theognis (and even with  $\kappa\epsilon$  in the same line, see Thgn. 1.723) and Pindar (e.g. *Pi. P.* 2.10) and  $\delta\tilde{\rho}\acute{\omicron}\tilde{\tau}' \alpha\tilde{\nu}$  10 times in Homer but as  $\delta\tilde{\rho}\acute{\omicron}\tilde{\tau}\alpha\nu$  (*h.Hom.* 3.71) and  $\delta\tilde{\rho}\acute{\omicron}\tilde{\tau}\alpha\nu$  (e.g. *h.Hom.* 4.287, Thgn. 1.575, *Pi. P.* 1.4) in other early authors. To edit the Homeric examples as two separate words with elision is an editorial decision. After all, editors have had no problem editing  $\epsilon\tilde{\pi}\eta\nu$  in Homeric Greek. However, the problem remains that we cannot be sure that similar examples did not exist for  $\kappa\epsilon$ , even though the fusion of  $\alpha\tilde{\nu}$  with subordinators seems likely diachronically.

15 Cf. Wakker (1994, p. 117) who noted that the modal particle and available mood was not enough to accurately classify conditional sentences.

Now, the absence of the modal particle in counterfactual subordinate clause that follow counterfactual matrix clauses would normally be explained as the result of mood attraction (e.g. Napoli, 2013). Mood attraction (or assimilation) is commonly viewed as taking place “when the mood of a verb occurring in a subordinate clause, which may be dependent or sub-dependent, *is assimilated to the mood of the matrix clause*. In other words, one does not find the *expected* mood in a given subordinate clause, but the same mood as in the corresponding matrix clause” (2013 my italics). Grammars and scholars alike would therefore view the symmetrical mood distribution of counterfactual optatives in the subordinate clauses following the counterfactual matrix clause in example 3 as caused by formal attraction.

(3) Ἐνθά κεν οὐκέτι ἔργον ἀνήρ ὀνόσαίτο μετελθών,

ὅς τις ἔτ’ ἄβλητος καὶ ἀνούτατος ὄξει χαλκῶ

δινεύοι κατὰ μέσσον, ἄγοι δέ ἐ Παλλὰς Ἀθήνη

χειρὸς ἑλοῦσ’, αὐτὰρ βελέων ἀπερύκοι ἐρωήν (*Il.* 4.539–542)

‘Then a man **could not** any more **have** entered into the battle and **made light of it**, one **who** still unwounded by missile or by thrust of sharp bronze **would move** through their midst, Pallas Athene **would lead** by the hand, and **would guard** him from the onrush of missiles’

La Roi (forthcoming a) has recently suggested that this explanation does not tell the whole story. He argues that the reason why the counterfactual mood need not be marked by the modal particle in the non-conditional subordinate clause despite this being a morphosyntactic rule (Kühner & Gerth 1898: p. 259) is that the counterfactuality of the matrix clause transfers to the subordinate clause.<sup>16</sup> In the case of example 3, the counterfactuality of a man entering and making light of the fighting makes it counterfactual that this person would be able to move through the battle field. In other words, the morphosyntactic rule of having a modal particle in non-conditional counterfactual subordinate clauses is overridden by the pragmatic rule of counterfactuality transfer. Supporting evidence for this *pragmatic* rule is provided by asymmetrical contexts in which counterfactuality transfer is found, as in example 4: here Proteus tells Menelaos how he could have reached home the quickest, but he evidently did not reach home the quickest, because he failed to make offerings before embarking:

(4) ἀλλὰ μάλ’ ὄφελλες Δί τ’ ἄλλοισίν τε θεοῖσι

ῥέξας ἱερὰ κάλ’ ἀναβαινέμεν, ὄφρα τάχιστα

σὴν ἐς πατρίδ’ ἴκοιο πλέων ἐπὶ οἴνοπα πόντον. (*Od.* 4.471–474)

‘But surely **you ought to have made choice offerings** to Zeus and the other gods **before embarking**, so that you **would have come** to your country the **quickest**, sailing over the wine-dark sea.’

16 As noted by la Roi (forthcoming b), this explanation puts intuitive comments by grammarians on linguistic footing, e.g. the comment that (counterfactual) mood attraction only occurs when both clauses are “innerlich abhängig” (Kühner & Gerth 1898: p. 259) and share the same mental conception (Kühner & Gerth 1898: p. 258).

La Roi (forthcoming a) argued that the counterfactual optative is triggered by the counterfactuality of the matrix clause: since Menelaos did not make the right offerings (=counterfactual matrix clause) he could not reach home the quickest (=counterfactual subordinate clause). After all, Menelaos' delay is why he went to Proteus to find out how to appease the gods and finally reach home. This explanation also clarifies why counterfactuality transfer may occur with counterfactual modal verbs without the modal particle in the matrix clause (e.g. ὤφελον with a counterfactual purpose clause, *Il.* 6.350). Moreover, this pragmatic rule can help explain cases of the modal particle in subordinate clauses where we might not have expected them, as in example 5.

(5) αἴθ' ὄφελον μείναι παρὰ Φαιήκεσσιν  
αὐτοῦ· ἐγὼ δέ **κεν ἄλλον** ὑπερμενέων **βασιλῆων**  
**ἐξικόμην**, ὅς **κέν** μ' ἐφίλει καὶ ἔπειπε νέεσθαι.

'Would that I had remained there among the Phaeacians. Then I would have come to **some other of the mighty kings, who** would have entertained me and sent me on my homeward way.' (Od. 13.204–206)

The reason for the modal particle in the subordinate relative clause following a counterfactual matrix clause is Odysseus' presupposition: he thinks that the Phaeacian king did not entertain him and send him homeward, because he does not realize yet that he is on Ithaca. This example thereby underlines that what is counterfactual is what the speaker supposes to be counterfactual.

### 2.3 Counterfactuality transfer and analogy in the Classical Greek mood system

In Classical Greek, the distribution of counterfactuality transfer across subordinate clause types is in fact telling of the role played by the pragmatics of counterfactual implicature transfer. Counterfactuality transfer occurs with relative, temporal, purpose, result, and comparative clauses (la Roi, forthcoming b), but only when the proposition in the subordinate clause is causally and temporally dependent on that in the main clause, e.g. (i) in a relative clause<sup>17</sup> εἴθ' ὄφελέν μοι κηδεμῶν ἢ ξυγγενῆς εἶναι τις ὅστις τοιαῦτ' ἐνουθέτει. (Ar. V. 731) 'If only there would be some kinsman or relative *who would give* me such *criticism*.'; (ii) in a purpose clause εἴθ' εἶχε φωνὴν ἔμφρον' ἀγγέλου δίκην, ὅπως διφροντίς οὕσα μὴ 'κινυσομένην (A. Ch. 195–196) 'If only it had a mind and a voice like a messenger, *in order that I wouldn't waver* between two minds.'; (iii) in a comparative clause εἰ μὲν νυν ἔμαθε ὅτι ἐν ταύτῃ πλέοι Ἀρτεμισίῃ, οὐκ ἂν ἐπαύσατο πρότερον ἢ εἰλέ μιν ἢ καὶ αὐτὸς ἦλω. (Hdt. 8.93.5–6) 'If he had known that she was in that ship, he would not have stopped *earlier than that he captured it* or was *captured* himself.' With temporal clauses, counterfac-

17 For an example of a counterfactual relative clause where the counterfactuality does not depend logically and temporally on the matrix clause, see X. An. 5.8.17 where the relative clause is also marked with the modal particle.

tuality transfer takes place with postposed temporal clauses meaning ‘until’ (μέχρι οὐ D. 53.25.4) or ‘before’ (πρὶν D. 20.96), which depend both temporally and causally on the matrix clause. Finally, counterfactuality transfer occurs after a counterfactual conditional matrix clause in a similar way as a counterfactual implication from a counterfactual conditional transfers to the main clause (Wakker 1994: p. 152). In the following example, the counterfactuality of the conditional (i.e. his father is *not* so extravagant, cf. the counterfactual main clause) implicates the counterfactuality of the propositions in the result clause.<sup>18</sup> In other words, because his father was *not* so extravagant, he *cannot* have kept another woman and maintained two establishments.

(6) εἰ γὰρ οὕτω δαπανηρὸς ἦν, ὥστε γάμῳ γεγαμηκῶς τὴν ἐμὴν μητέρα, ἑτέραν εἶχε γυναῖκα, ἣς ὑμεῖς ἐστέ, καὶ δὴ οἰκίας ᾗκει, πῶς ἂν ἀργύριον τοιοῦτος ὦν κατέλιπεν; (D. 39.26.2)

‘For if my father was so extravagant so that after having married my mother in lawful wedlock, he kept another woman, whose children you are, and maintained two establishments, how, if he were a man of this sort, could he have left any money?’

There is also some evidence for the weakening of the morphosyntactic rules of marking counterfactual mood with the modal particle: the modal particle also starts to be found with already counterfactual modal verbs, e.g. ἔδει with ἄν. Grammars generally suggest that the usage of the modal particle with the counterfactual modal verb creates a difference in meaning. For example, the Cambridge Grammar (Van Emde Boas et al. 2019: p. 444) contends that the difference between the counterfactual use of ἔδει without ἄν and with ἄν is that for the former only the target of the necessity is/was not realized whereas with ἄν the necessity itself did/does not exist. To give the latter cases a different explanation rests upon a long tradition going back all the way to Hermann in the early 19<sup>th</sup> century (see Goodwin 1890: p. 78) and this explanation has been repeated in grammars and research since (Goodwin 1889: pp. 404–409; Kühner & Gerth 1898: p. 206; Stahl 1907: p. 357; Schwyzer & Debrunner 1950: p. 309; Smyth & Messing 1968: p. 521; Rijksbaron 2006: p. 26; Ruiz Yamuza 2008: p. 127).<sup>19</sup> However, in my view, this hypothesis does not accurately explain counterfactuality nor the examples in context. First of all, this explanation treats a counterfactual proposition as belonging to just one part of the clause, either the past necessity (i.e. the modal verb) or the action in the infinitive dependent on the necessity. Yet, a state of affairs as a whole in its clausal context is what is implied to be counterfactual, e.g. *he ought to have come to the party yesterday* = there was a past necessity that he came to the party but he did not. The past necessity in isolation is, after all, not counterfactual, but only in combination with its contextual complement. Second, there is no difference in counterfactual uses of modal verbs without ἄν and with ἄν. Compare the following two examples of ἔδει without ἄν (example 7) and with ἄν (example 8).

18 For a similar example with a relative clause being dependent on a counterfactual conditional, see Lys. 12.29.

19 A slightly more nuanced evaluation of these cases is provided by Goodwin (1890) who critically discusses both counterfactual usages with and without the modal particle. Although he suggests (among others) that the rule does not have general application, he still reads a difference in meaning in the two groups.

(7) καίτοι **καί εἰ** τούτων ἦν πονηρότατος, κατὰ τοὺς νόμους **ἔδει** παρ' ἐμοῦ **δίκην λαμβάνειν**, οὐκ ἔφ' οἷς ἐλητούργουν ὑβρίζειν. (D. 21.189)

'Yet **even if I were** the most unscrupulous of that gang, **I ought rather to be punished** according to the laws than insulted in the performance of a public service.'

(8) **Εἰ** οὖν **παρακαλοῦμεν** ἀλλήλους, ὦ Καλλίκευς, δημοσίᾳ πράζοντες τῶν πολιτικῶν πραγμάτων ἐπὶ τὰ οἰκοδομικά, ἢ τειχῶν ἢ νεωρίων ἢ ἱερῶν ἐπὶ τὰ μέγιστα οἰκοδομήματα, πότερον **ἔδει ἄν** ἡμᾶς σκέψασθαι ἡμᾶς αὐτοὺς καὶ ἐξετάσαι πρῶτον μὲν εἰ ἐπιστάμεθα τὴν τέχνην ἢ οὐκ ἐπιστάμεθα, τὴν οἰκοδομικήν, καὶ παρὰ τοῦ ἐμάθομεν; **ἔδει ἄν** ἢ οὐ; (Pl. *Grg.* 514a5–10)

'Then **if** you and I, Callicles, in setting about some piece of public business for the state, **were to invite** one another to see to the building part of it, say the most important erections either of walls or arsenals or temples, **ought we** to consider and examine ourselves, first as to whether we understood the art of building or not, and from whom we had learnt it? **Would we have to do this**, or not?'

Both counterfactual usages of the modal verb are used to indicate that something would have been necessary<sup>20</sup> if things had been different, the counterfactual scenario being introduced by the preceding counterfactual conditional clause. In my view, the reason why the modal particle starts to be found with such counterfactual modal verbs is diachronic: the modal particle has been added via analogy with the counterfactuals use of the modal particle ἄν with non-modal verbs. The modal verb occurs without ἄν in main clauses 25 times but 17 times with ἄν in Classical Greek and gains prominence over time, e.g. in Herodotus, Aristophanes and Sophocles (1 vs 0), in Thucydides (1 vs 2) but in Demosthenes (8 vs 5) and in Plato (8 vs 7). For the same reason we find that other counterfactual modal verbs which were already used counterfactually without the modal particle start to occur with the modal particle as well: ἐξῆν Hdt. 7.56.8 without vs Lys. 4.13 with ἄν, χρῆν without E. *El.* 357 vs D. 18.195 with ἄν, or ἐβουλόμην<sup>21</sup> Aeschin. 3.2 without vs S. *Ph.* 1239 with ἄν.

Finally, another major change in the use of the modal particle in Classical Greek is that its usage spread beyond the syntactic contexts in which it could be found in Archaic Greek. In Archaic Greek, the counterfactual indicative could only rarely be found with the modal particle in non-conditional subordinate contexts, viz. in a dependent statement, a causal or a relative clause (la Roi 2022a). In Classical Greek, by contrast, the usage of the modal particle in subordinate clauses has spread to other subordinate clause types such as purpose clauses (Pl. *Lg.* 967b3), result clauses (D. 18.30.9), comparative clauses (Is. 12.12.2, see above), and dependent questions (Is. 2.25).<sup>22</sup> At the same time, the counterfactual indicatives which were marked with primarily κε in Archaic Greek, are now of course marked by ἄν in Attic Greek (unless there is a counterfactual modal verb or counterfactuality transfer from the matrix clause of course): dependent statements

20 The strategy also occurs with ἔδει in the meaning 'need (for)' with a genitive complement, for which see Pl. *La.* 184d1 and *Phd.* 108a1.

21 Cf. Kühner & Gerth (1898: pp. 205–206). See also Antiph. 5.1.1 and 5.1.14 for occurrences without ἄν.

22 Another new option is the counterfactual use of ὥς 'as if', see Pl. *Grg.* 518a6.

(Lys. 21.7.2 with ὅτι), causal (D. 19.334.3), and relative clauses (Ar. *Lys.* 109). The relative frequencies for the different subordinate clause types in my corpus support the role played by counterfactuality transfer, as, for example, I found only 1 purpose clause and 1 temporal subordinate clauses with ἄν in my corpus but after a non-counterfactual matrix clause (see Pl. *Lg.* 967b3 and Lys. 15.6). In other words, there is no temporal and causal dependency between the matrix and subordinate clause in these contexts. The same explanation goes for the very exceptional use of ἄν in a counterfactual conditional in D. 50.67 εἰ τοίνυν ἄν ἐμοὶ τότε ὠργίζεσθε ... πῶς οὐχὶ νῦν προσήκει ὑμᾶς τοῦτον εισπράξαι μοι τὰ ἀναλώματα ...; “If, then, *you would have been indignant* in that case, because I refused to serve beyond my term, *should you not now exact from the defendant the money...*.” This use (mentioned by Kühner & Gerth 1898: p. 258; Schwyzer & Debrunner 1950: p. 686) precedes a non-counterfactual matrix clause which motivates the use of ἄν.

The modal particle also spread to non-finite contexts in Classical Greek, as ἄν can be added both to infinitives and participles to use them to express a counterfactual state affairs (Van Emde Boas et al. 2019: pp. 595; 610). This usage was unavailable to Archaic Greek, even though ἄν had been added to the infinitive to express a dependent potential state of affairs (see Goodwin 1889: p. 69 for examples). This evidence indicates that the analogical spread from the counterfactual usage of ἄν had spread from finite contexts to nonfinite contexts comparatively late. Another indication that these usages were based on the finite usages from main clauses is provided by their aspectual range: ἄν with the present, aorist and perfect infinitive are diachronically based on the finite contexts of ἄν with the imperfect, aorist and pluperfect respectively (Goodwin 1889: pp. 67–68), whereas ἄν with the present or aorist participle is based on the finite contexts of ἄν with the imperfect and aorist (Goodwin 1889: pp. 70–71). Furthermore, the counterfactual usage of ἄν with the participle (in adverbial or complement function, Van Emde Boas et al. 2019: p. 610) arises later than its counterfactual use with the infinitive (cf. the list of mostly potential examples given by Stahl 1907: pp. 336–337), perhaps because ἄν occurred with the infinitive in a potential state of affairs earlier. When these counterfactual constructions are used, we can often tell by the co-text whether the construction is used counterfactually (Van Emde Boas et al. 2019: p. 595). For example, in 9 a counterfactual conditional and declarative follow. Also the use of δοκεῖς and ποτε point to a rhetorical question which counterfactual questions typically are e.g. who would have thought=no-body would have thought (la Roi 2022a).

(9) δοκεῖς γὰρ ἄν με τόνδε θωπεῦσαι ποτε

εἰ μή τι κερδαίνουσαν ἢ τεχνωμένην;

οὐδ’ ἄν προσεῖπον οὐδ’ ἄν ἠψάμην χερσίν. (E. *Med.* 368–370)

‘Do you think I would ever have fawned on this man unless I stood to gain, unless I were plotting? I would not even have spoken to him or touched him with my hands.’

The co-text can, however, also be non-counterfactual and therefore require contextual interpretation, for example when a counterfactual participle follows a non-counterfactual matrix clause, ἀδυνάτων ἄν ὄντων πρὸς ναῦς πολλὰς ἀλλήλοισ ἐπιβοηθεῖν (Th. 1.73.4)

“when the multitude of his vessels would have made any combination for self-defence impossible.” In addition, since the counterfactual use of ἄν with the participle cannot function as a counterfactual conditional since it does not need ἄν for this (Goodwin 1889: p. 71), contextual interpretation may involve determining to which verbal form ἄν belongs, as in example 10. Here it is quite evident that the modal particle belongs to the main clause predicate, as the participle functions as a counterfactual condition.

(10) ἢ που **τραφεῖς ἄν** μητρὸς εὐγενοῦς ἄπο

ὕψήλ’ ἐκόμπεις κάπ’ ἄκρων ὠδοιπόρεις (S. *Aj.* 1229–1230)

‘You would have used high words, I think, and have walked on the tips of your toes **if you had been the son** of a noble mother’

The specific factors motivating the position of ἄν in a sentence are disputed (contrast Scheppers 2011 and Goldstein 2016), as also indicated by the fact that ἄν could precede or follow its participial host (contrast Th. 1.73.4 and 1.11.2).

## 2.4 The chronology of past habitual and generic constructions in Ancient Greek

In Classical Greek, the modal particle ἄν had come to be used with the past indicative for past habituais, expressing that a state of affairs was the case on several different occasions (Comrie 1976: pp. 27–28; Bybee & Perkins & Pagliuca 1994: p. 127), such as *He used to run on Sunday*. As an habitual<sup>23</sup> construction, it differs from iteratives which express repetition on the *same* occasion (Bybee & Perkins & Pagliuca 1994: p. 160 e.g. *search for keys all morning*) or generic constructions which express repetition on *all* occasions (Krifka et al. 1995: pp. 3–6), such as *Church service was/is/will be on Sundays*. Up until recently, the diachronic source of this construction had been taken to be the so-called past potential, even though this construction had already been refuted by Wakker as discussed above. La Roi (2022b) therefore suggested that this construction developed from the past counterfactual usage of the indicative with the modal particle. First of all, there are typological parallels for a diachronic connection between past counterfactuality and past habituality, e.g. the same mood or modal verb being used for both and the existence of counterfactual habitual markers (Karawani 2014: pp. 77–80). For example, English *would* can be used both counterfactually and habitually, as shown by the following context which may be interpreted counterfactually or habitually depending on the linguistic context *If she had the time, my grandma would go to the garden, pick some apples*

23 Note, however, that from the perspective of modern linguistics, the literature on Ancient Greek do not use the label iterative or habitual in the correct way, as they, for example, use the term iterative to refer to the past habitual construction, see Goodwin (1889: p. 56), Schwyzer & Debrunner (1950: p. 350), Wakker (1994: p. 159; 2006b), Crespo et al. (2003: p. 286), Beck et al. (2012: p. 53), Allan (2019: p. 31) and van Emde Boas et al. (2019: p. 415). The same problem emerges with the ‘iterative’ optative usage which actually comprises both habitual and generic usage.

and make us the best pie (Karawani 2014: p. 118).<sup>24</sup> Moreover, there are clear conceptual similarities between past counterfactual and past habituales, as they express epistemic certainty about a past event that would have occurred (but didn't or did so regularly), an induction from limited observation about the actual world to a generalization about possible worlds (cf. Comrie 1976: p. 40).

In the corpus evidence from Ancient Greek, we can observe a diachronic evolution from past counterfactual use of the indicative with the modal particle to the past habitual use in several ways. First of all, counterfactual contexts which also include an habitual component exist: *καί κε θάμ' ἐνθάδ' ἔόντες ἐμισγόμεθ'.* (*Od.* 4.178) "And there we would have often met" (with regard to the counterfactual scenario of Odysseus having returned with Menelaus). Second, the past habitual construction uses grammatical aspects in the same way that past counterfactual indicatives used them, to provide a specific viewpoint the event in question (cf. Allan 2019: p. 31; la Roi 2022b). In example 11, the use of the imperfect to signal an unbounded viewpoint is motivated by the contextual circumstance that Cleomenes never accepted a cup (see the last lines of the example).

(11) ὅκως δὲ ἴδοιτο ὁ Κλεομένης τὰ ποτήρια, ἀπεθώμαζέ τε καὶ ἐξεπλήσσετο· ὁ δὲ ἄν ἐκέλευε αὐτὸν ἀποφέρεισθαι αὐτῶν ὅσα βούλοιο. τοῦτο καὶ δις καὶ τρίς εἶπαντος Μαιανδρίου ὁ Κλεομένης δικαιοτάτος ἀνδρῶν γίνεται, ὃς λαβεῖν μὲν διδόμενα οὐκ ἐδικαίου

'Whenever Cleomenes saw them, he marvelled greatly at the cups. Maeandrius **would tell him** to take as many as he liked. Maeandrius made this offer two or three times; Cleomenes showed his great integrity in that he would not accept;' (Hdt. 3.148.7–9)

Third, we find similarly ambiguous usages of the construction where either a past habitual or counterfactual reading could make sense in context. In example 12, Pheidippides could either mean that he used to not be able to (past habitual) or that he would not have been able to back then (past counterfactual).

(12) ἐγὼ γὰρ ὅτε μὲν ἰππικῇ τὸν νοῦν μόνη προσεῖχον,

οὐδ' ἄν τρι' εἰπεῖν ῥήμαθ' οἴος τ' ἦν πρὶν ἐξαμαρτεῖν (*Ar. Nub.* 1401–1402)

'Back when I had a one-track mind for horse racing, **I couldn't get three words out** before I stumbled over them.'

Fourth and finally, there are other contemporary evolutions which point to the tight connection of the past habitual use of the indicative with ἄν with other past habitual constructions, on the one hand, and past counterfactuals, on the other hand. In Herodotus, we find a mixing of past habitual strategies, as he uses the *σκ*-suffix with a past indicative and ἄν. La Roi (2020a: pp. 150–151; 2022b) has argued that this novel construction originated via analogy, because the *σκ*-suffix had already developed a past habitual usage out of its older past iterative usage (past iterative > past frequentative > past habitual > imperfective

24 Another contrastive example would be: *Van Gogh would have liked his current popularity vs Shakespeare would have worked in his garden from 1 to 5 in the afternoon.*

backgrounder). Thus, in Herodotus one finds a collection of past habitual strategies, e.g. past habitual  $\sigma\kappa$ , past habitual indicative with  $\alpha\tilde{\nu}$  or both combined, as in example 13.

- (13) κλέπτεσκε ἄν περιῶν [...] (Hdt. 2.174.3)  
 ‘he would go around stealing’

La Roi (2022b) has also pointed out that the previously past counterfactual optative was the source of a past habitual usage (cf. their shared past temporal reference). In Homeric Greek, we still find this usage sporadically in the main clause as an archaism, as in example 14 where Odysseus boasts how he used to use his bow very effectively during the fighting.

- (14) πάντα γὰρ οὐ κακός εἰμι, μετ’ ἀνδράσιν ὅσσοι ἄεθλοι·  
 εὖ μὲν τόξον οἶδα ἐῤῥοον ἀμφαφάσθαι·  
 πρῶτός κ’ ἀνδρα βάλοιμι οἷστεύσας ἐν ὀμίλῳ  
 ἀνδρῶν δυσμενέων, εἰ καὶ μάλα πολλοὶ ἐταῖροι  
 ἄγχι παρασταίεν καὶ τοξαζοῖατο φωτῶν. (Od. 8.214–218)

‘For in all things I am no weakling, not in any of the contests that are practiced among men. Well do I know how to handle the polished bow, and **always would I be the first to shoot** and hit my man in the throng of the foe, even though many comrades would stand by me and be shooting at the men.’

In fact, this past habitual usage of the optative is still found in contexts where the more archaic past counterfactual usage of the optative was also used, such as the main clause (as in 14) or a relative clause (as in past counterfactual *Il.* 13.344 versus past habitual *Od.* 17.317). An obscuring factor for observing this diachrony will probably have been that the past habitual use of the optative developed further into a past generic construction as well,<sup>25</sup> that is, to express that a past event occurred on all occasions (cf. past generic ἴδοιτο in ex. 11 where the seeing of the cups (=subordinate clause) happened *every time* he marveled at the cups (=main clause)). In Classical Greek, but especially Post-Classical Greek, this generic usage starts to be replaced by the past indicative (cf. the ὄτε clause in ex. 12). Moreover, the past habitual construction with  $\alpha\tilde{\nu}$  also developed past generic usages in Postclassical Greek: ἡνίκα δ’ ἄν εἰσεπορεύετο Μωσῆς εἰς τὴν σκηνὴν ἔξω τῆς παρεμβολῆς, εἰστήκει πᾶς ὁ λαὸς σκοπεύοντες ἕκαστος παρὰ τὰς θύρας τῆς σκηνῆς αὐτοῦ (LXX Ex 33.8) “Whenever Moses went out to the tent without the camp, all the people rose and stood, each of them, at the entrance of their tents and watched Moses” (la Roi 2022b). In Classical Greek, the past-referring generic optative construction was used for this (cf. ἴδοιτο in ex. 11). This change in Post-Classical Greek thus contributed to the replacement of the habitual and generic usages of the optative (wrongly dubbed ‘iterative’ optative in the literature). In fact, the generic optative becomes rare in Post-classical Greek (la Roi, 2022b), e.g. in the Septuagint, New Testament and the papyri

25 Cf. also Probert (2015: p. 83) who discusses the past generic use of the ‘iterative’ optative in conditionals.

(see Turner 1963: pp. 124–125; Mandilaras 1973: p. 286; Muraoka 2016: p. 327). Finally, the use of ἄν with the infinitive and participle also developed a past habitual meaning in some cases (Goodwin 1889: p. 69), illustrating the connection between past counterfactual and past habitual usage of the infinitive (contrast examples 9, 15 and 16 (from Goldstein 2013: p. 374)).

(15) ἡ πολλὰκις ἐννυχίαισι φροντίσι συγγεγένημαι,  
καὶ διεζήτηχ' ὀπόθεν ποτὲ φαύλως  
ἔσθιει Κλεώνυμος.  
φασὶ γὰρ <ποτ'> αὐτὸν ἐρεπτόμενον  
τὰ τῶν ἐχόντων ἀνέρων  
οὐκ ἄν ἐξελοῦν ἀπὸ τῆς σιπύρης.  
τοὺς δ' ἀντιβολεῖν ἄν ὁμῶς.  
“ἴθ', ὦ ἄνα, πρὸς γονάτων,  
ἔξελθε καὶ σύγγνωθι τῇ τραπέζῃ.” (Ar. *Eq.* 1290–1299)  
'For they do say that he used to pig out  
on the substance of rich men  
and **wouldn't leave the trough,**  
though **they would all beg him,**  
“By your knees we implore you, sir,  
have mercy on the table and leave!”

(16) μαμμᾶν δ' ἄν αἰτήσαντος, ἤκόν σοι φέρων ἄν ἄρτον (Ar. *Nub.* 1383)  
'When you used to ask for “**babba,**” I'd be there with bread'

### 3. Towards a chronology of the modal particles in Ancient Greek

Focusing on those cases where the use of the modal particle contributes to a different modal meaning, we can construct the following chronology for constructional developments with the modal particle as represented in table 1. The table should be read from left to right. The arrows are used to indicate the sources for the constructional innovations. The full line indicates constructional stability and the interrupted line constructional loss. This map thus resembles the semantic map of the Ancient Greek mood system devised by Allan (2013: p. 31) but provides new synchronic and diachronic details on the diachronic spread of the modal particle. I use the term de-activated as a shorthand for the use of mood in subordinate clauses, as subordinate clauses prototypically receive their illocutionary force from their main clause (Cristofaro 2003: pp. 29–36; la Roi 2021: p. 8). An exception is appositive relative clauses (Lehmann 1989: p. 160) in which we for example find wish optatives in Ancient Greek (la Roi 2020b: pp. 225–226).

**Table 1** Diachronic constructional map of ἄν/κε(ν) and the Ancient Greek mood system

Clause	Verb form	Illocution	Archaic Greek		Classical Greek	
			Meaning	Modal particles	Meaning	Modal particle
Main clause	Optative	Declarative & Interrogative	Counterfactual	<b>Obligatory</b>	-----	-
		Declarative & Interrogative	<b>Potential</b>	<i>Optional</i>	-----	Potential
		Declarative	Past habitual	<b>Obligatory</b>	-----	-
		Wish	Realizable wish	<i>Optional</i>	-----	-
	Past indicative	Declarative & Interrogative	Counterfactual	<b>Obligatory</b>	-----	Counterfactual
		Declarative	-	-	-----	Past habitual
	Subjunctive	Declarative	Future-referring	<i>Optional</i>	-----	-
	Future indicative	Declarative	Future-referring	<i>Optional</i>	-----	Future-referring
Subordinate clause	Optative	De-activated	Counterfactual	<b>Obligatory</b> (=non-conditional & non-CFT)	-----	-
			Potential	<i>Optional</i> (conditional clauses)	-----	Potential
			Potential	<i>Optional</i>	-----	Potential
	Past indicative		Counterfactual	<b>Obligatory</b> (=non-conditional & non-CFT)	-----	Counterfactual
			Counterfactual	<i>Optional</i> (=conditional clauses)	-----	<i>Optional</i> (=conditional clauses)
	Subjunctive		Future-referring	<i>Optional</i>	-----	Future-referring
			Future-referring	<i>Optional</i>	-----	Future-referring
	Future indicative		Future-referring	<i>Optional</i>	-----	Future-referring
			Future-referring	<i>Optional</i>	-----	Future-referring
	Infinitive		Potential	<b>Obligatory</b>	-----	Potential
-		-	-----	Past counterfactual		
Participle	-	-	-----	Past habitual		
	-	-	-----	Past counterfactual		
	-	-	-----	Past counterfactual		
	-	-	-----	Past habitual		

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First of all, I have shown how the obligatory usages of the modal particle (i.e. where it is needed for a certain modal meaning) provide a window into changes in the Ancient Greek mood system: in the main clause, the past habitual optative usage was created out of the past counterfactual usage of the optative, and the past counterfactual indicative developed a past habitual indicative usage (wrongly labelled iterative before); in subordinate clauses, the counterfactual indicative among others replaced the older counterfactual optative, spread to new subordinate clause types in which the counterfactual optative had not been available and opened up new counterfactual and habitual usages for the infinitive and participle in Classical Greek. Also, potential ‘counterexamples’ to obligatory usage of a modal particle have their own motivation for not needing it: counterfactual modal verbs being counterfactual already and receiving *äv* via analogy with the counterfactual indicative in Classical Greek, a scalar adverb with past indicative generating a counterfactual implicature (la Roi forthcoming b), or subordinate clauses without the modal particle receiving their counterfactuality from their matrix clause through counterfactuality transfer (la Roi, forthcoming a). Furthermore, reading the table from left to right illustrates that some archaic usages disappear, such as the counterfactual optative, past habitual optative or future-referring subjunctive in the main clause.

Second, optional usages of the modal particles were shown to be more stable from Archaic to Classical Greek than previously suggested. Whereas some modal particle usages are optionally present on an infrequent basis especially in Archaic Greek, such as *ke* in a wish or the modal particles in conditional clauses (cf. Ruijgh 1971: p. 299; Wakker 1994: p. 205 and discussion above in section 2.1), others are optional both in Archaic Greek and in Classical Greek, such as the future indicative in the main clause or the potential optative in the main and subordinate clause. The same applies to the subjunctive in subordinate clauses which can optionally have the modal particle (Moorhouse 1982: pp. 284–286; Bers 1984: p. 123). As also mentioned above, these optional patterns have met prescriptivist attitudes by grammarians who argued for emendation despite textually sound attestation (Bers 1984: pp. 128–138; Zingg 2017). Further in-depth examinations to assess the linguistic reality of these patterns in our texts would therefore improve our grasp of these contested optional patterns.

Third and finally, a diachronic map such as table 1 should be the starting point for investigations into less well known areas such as the modal particles in the dialects or the modal particle in optional patterns in Archaic Greek. After all, the modal particles in Homeric Greek show clear correlations<sup>26</sup> with modal particle usage in Ancient Greek dialects, because optional uses of the modal particle found in Homeric Greek are also attested in different dialects with potential optatives or in conditionals.<sup>27</sup> Similarly, the use of the modal particles in literary dialects is generally richer in linguistically optional

26 I use the term correlations to avoid the impression that I want to distinguish dialectal phases in Homeric Greek, for which see Wathelet (1997: p. 261).

27 See Slotty (1915: p. 84) for the potential optative in dialects and Bechtel (1921: pp. 202; 277–278; 366; 430; 506) who pays special attention to the optionality of the modal particle in West Greek dialects. For an up-to-date overview of the state of research into Ancient Greek dialects, see García Ramón (2017).

patterns, e.g. the past habitual -σκ past indicative with ἄν construction in Herodotus and the use of multiple modal particles in Pindar (ἄν, κε and κεν).<sup>28</sup>

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28 Due to limitations of space, I could not discuss this matter here, but aim to do so in future work.

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Ezra la Roi / ezra.laroi@ugent.be

<https://orcid.org/0000-0002-4542-0610>

Department of Linguistics (Greek section)

Faculty of Arts and Philosophy, Ghent University

Blandijnberg 2, 9000 Gent, Belgium



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