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Interlocked life cycles of counterfactual mood forms from Archaic to Classical Greek

Aspect, actionality and changing temporal reference

Abstract: Based on a corpus study of 2074 occurrences in Archaic (424) and Classical (1650) Greek, I offer a unified explanation for the temporal reference extensions of counterfactual mood forms in declarative, interrogative, wish and de-activated illocutions (i.e. subordinate clauses). I propose a diachronic trajectory (life cycle) for counterfactual mood forms from past to present and future reference. Extensions are constrained diachronically by grammatical aspect (e.g. imperfect facilitating extensions to present reference more than the aorist or pluperfect), and actionality of the state of affairs in clausal context (atelic states of affairs enabling temporal extensions), as well as synchronically by illocutionary usage, collocations with temporal adverbs and common ground knowledge (i.e. temporal location known or not). This trajectory explains the replacements of the inherited counterfactual optative by the counterfactual indicative, because their life cycles are interlocked: in Archaic Greek the counterfactual optative had already extended from its original past to present and future reference and is losing its counterfactuality, whereas the counterfactual indicative referred only to the past and sometimes the present. In Classical Greek, temporal extensions of the counterfactual indicative are continued across different aspects, clause types and illocutions at different rates of change and the counterfactual optative is filtered out of the system.

Keywords: counterfactuality, aspect, temporal reference, illocution, life cycle, Ancient Greek, mood, modal particle, pragmatics, relative chronology

1 Tracing the historical replacements of counterfactual mood forms in Ancient Greek

The surviving corpus evidence from Indo-European languages such as Sanskrit, Greek, Latin, Gothic and Old Church Slavonic allows the reconstruction of an optative mood form. Similar to other Indo-European languages, Archaic Greek (i.e. the *Iliad*, *Odyssey*, Homeric Hymns and Hesiod) seems to have inherited the

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optative mood and its functions from its Proto-Indo-European ancestor.¹ As a result, the optative's potential and wish uses, both the realizable and unrealizable (i.e. counterfactual, henceforth CF²) type, that we encounter in Archaic Greek are inherited features, whereas its replacements by CF indicatives are innovations which in Classical Greek fully replace the CF optatives. In other words, the Classical Greek optative still has both uses (potential and wish) but has lost its CF meaning. Relevant from an Indo-European perspective is that Ancient Greek provides ample textual evidence for tracing this restructuring of the functional domain of the optative mood, in contrast to very limited textual evidence from other early Indo-European languages for the development of the optative mood.³ To illustrate the vast array of historical alternatives to the inherited CF optative, the following table contrasts the inherited CF optative usages with its indicative replacements. I split the historical stages into different columns to emphasize the historical developments, although this obviously represents a simplification. Please note that in this paper I make a more liberal use of the term CF *mood forms* than is usual (i.e. in referring to a morphological category, see Hengeveld 2004: 1190), because I use it to refer to those usages of CF mood where their counterfactuality can be said to derive from the usage of a CF mood form rather than the modality of the verb, e.g. conditional with past indicative, past indicative with modal particle (ἄν/κε(v)), or the fossilized mood form of ὄφελον which replaces the CF indicative use for wishes. I also use the term de-activated as a shorthand for CF mood forms in subordinate clauses, since subordinate clauses prototypically do not have their own illocutionary force but get it from their matrix clause, e.g. the conditional inheriting declarative illocutionary force in 'if it rains, I take an umbrella' but interrogative illocutionary force in 'why do I take an umbrella when it rains?' (Cristofaro 1998: 8–10; Cristofaro (2003: 29–36), who discusses the typical lack of inherent illocutionary force of subordinate clauses). By contrast, in subordinate clauses (e.g.

¹ See Brugmann & Thumb 1913: 589–591; Strunk 1984: 144–146, Rix 1986; Ruijgh 1992: 81–82 and Lundquist & Yates 2018: 2144f.

² I define counterfactuality as a state of affairs for which the condition for realization is deemed *unrealizable* by the speaker in the past, present or future. Cf. Declerck & Reed (2001: 479) who define counterfactuality as a state of affairs “which is assumed by the speaker to be different from (incompatible with) the actual world.” See section 2 for further discussion.

³ For example, in Latin the optative is continued as the subjunctive (cf. *simus* or *velis*) and in Old Church Slavonic as the imperative (Clackson 2007: 120, 163). Two other problems are (1) the temporal gap of attestation of the optative across later attested branches of Indo-European languages and (2) the difficulty in comparing formal aspects for comparative reconstruction of functions. For an up-to-date overview of this problem, see Pitts 2019. As will become clear in this paper, the role of functional and diachronic comparison may yield more insights into the diachronic trajectory of the PIE optative.

αἶ γάρ wishes) historically received re-activation of their illocutionary force and are consequently discursively independent, meaning that their illocutionary force is not pragmatically dependent on features of the context (see la Roi 2021: 7–10 with discussion and further references, and Allan 2013: 36–42 for the prehistory of subordinate clause usages). Lastly, I adopt the convention of Revuelta Puigdollers (2017) and use ὄφελ(λ)ov to refer to the different past forms of the verb ὀφείλω ‘owe, ought’ and, for example, “aorist ὄφελ(λ)ov” to refer specifically to its use in the aorist.

Table 1: The historical replacements of CF mood forms in Ancient Greek

Illocution	Archaic Greek	Classical Greek
Mood	optative	indicative
Wish	– independent – insubordinate	– insubordinate – ὄφελ(λ)ov
Declarative	– with ἄν/κε(v)	– with ἄν
Interrogative	– with ἄν/κε(v)	– with ἄν
De-activated	– conditional – comparative – relative with κε	– conditional – comparative – relative with ἄν/κε(v) – causal with κε – ὡς clause with κε
		– conditional – comparative with ἄν – relative with ἄν – causal with ἄν – temporal with ἄν – purpose with ἄν – result with ἄν – ὅτι/ὡς clause with ἄν – indirect question with ἄν

As becomes readily apparent, the replacement of the CF optative has to some degree already started before Archaic Greek, since we find archaic usages of the CF optative (Table 1, Column 2) next to indicative replacements (Table 1, Column 3) with the same function in Archaic Greek. By contrast, we also find innovative alternatives particular to Classical Greek which are absent from the Archaic Greek evidence. Finally, with the organization of this table I intentionally invite the reader to draw conclusions on the diachronic relation between the CF indicative and optative mood forms, because, as I argue, no satisfactory scenario has been proposed yet

that can account for all the different replacements of CF mood forms, nor one that fully covers the available evidence. Using the available corpus evidence I provide the details for how these replacements took place at various rates across different syntactic and pragmatic contexts and suggest relative chronologies (e.g. the originally CF optative losing counterfactuality when the CF indicative is taking over), but we first need to review existing hypotheses about these developments.

Thus far, roughly five different scenarios have been proposed in the literature for the replacement of the CF optative, but their explanations generally only account for the alternatives with the CF indicative in conditional and main clauses, and their explanations do not explain all changes in a unified manner.⁴ The first scenario can be identified with Brugmann & Thumb (1913: 589–591), who in a similar way saw the non-CF and CF functions of the optative as inherited features and the past indicative as being introduced to more clearly mark the past. This explanation lies at the heart of the *communis opinio* that CF indicatives replaced the CF past optative mood forms in Archaic Greek.⁵ The second scenario can be identified with Krisch (1986), who suggested that the CF indicative found in CF indicative conditionals in Archaic Greek is actually an injunctive, an unaugmented tenseless form found for example in Vedic Sanskrit (Kiparsky 2005) and sometimes reconstructed for PIE. Some have also recently tried to revive this idea and argue that Archaic Greek had CF injunctives (Bartolotta & Kölligan 2020). However, as already pointed out before (De Decker 2015: 230), Archaic Greek did not possess a productive injunctive category, nor can the use of the Archaic *past* indicative in conditionals with the negator μή be equated with Vedic, because Vedic does not use the injunctive in counterfactual conditionals (Hettrich 1998: 263) but in negated prohibitions, general statements or recalling known facts. Thus, even when the injunctive is reconstructed for other IE languages (Lundquist & Yates 2018: 2145 “treat it as a category primarily of Old Indic grammar”), the counterfactual indicative is not an injunctive. The third scenario is offered by Dunkel (1990), who hypothesized that the CF and non-CF functions of moods were originally distinguished with modal particles, but confused in IE languages such as Ancient Greek, because the optative intruded on the CF indicative. In other words, he saw the CF indicative as going back to PIE, but, since other early IE languages typically do not distinguish these nuances (Hettrich 1998: 264) and Dunkel relies on doubtful reconstructions (De Decker 2015: 229f.), this scenario is very unlikely. The fourth scenario is shared by Gerth, Ruijgh and Hettrich (Gerth 1878; Ruijgh 1992; Hettrich 1998), who argued

4 Cf. the earlier summary of their arguments and some of their flaws by De Decker (2015: 221–240). As will become clear below, I do not fully agree on all points with De Decker, which also stems from the fact that my corpus is larger.

5 See Wakker 1994: 205–214; Hettrich 1998; Allan 2013: 39–41.

that the substitution by the indicative started with ‘if not’ (εἰ μὴ) conditionals that follow a CF matrix clause, but they differ on the details of evolution that follow. For example, Hettrich discussed different steps by which the CF indicative spread from the *if not* conditionals to the declarative main clause use (a hypothesis which I think is not in line with the evidence provided by declarative CF indicatives, see section 4). Their scenario rightly emphasizes the diachronic importance of the *if not* examples, since they play an important role in the replacement of the CF indicative, although not for all the reasons mentioned by them (see section 3 and 4). The final scenario was offered more recently by Willmott (2007: 48–52) who suggested that there is no historical replacement at all but rather a distinct modal difference between the use of the optative and the indicative.⁶ As also explained by De Decker (2015: 233), this distinction does not hold in the examples she discusses nor, I suggest, can it explain the temporal reference distribution of the indicative and optative counterfactuals in Archaic Greek.

In sum, existing diachronic explanations are unable to explain the spread of the CF indicative at the expense of the CF optative in Ancient Greek in a unified way. Those scenarios which do not rely on heavy speculative reconstruction are either rather general, based on limited corpus evidence, or provide a rather complex evolutionary trajectory. Therefore, this paper offers an alternative scenario which remedies these limitations by analyzing all types of CF mood forms in Archaic and Classical Greek and explaining the replacements within a unified model of change using recent insights from cross-linguistic research on the diachronic typology of counterfactuals. In short, I argue that the Archaic Greek optative is at the end of its CF life cycle and is replaced by the indicative which is at the start of its counterfactual life cycle.⁷ The most important benefit of this explanatory trajectory is that it explains the changing distribution of the CF constructions: the CF indicative

⁶ This suggestion is followed by Taylor (2020), but she fails to address the difficulties associated with taking up this position.

⁷ The cyclical nature of morphosyntactic change has also been studied for other linguistic domains, most famously negation in the so-called Jespersen cycle. See van Gelderen 2009 and Hansen 2020 for further literature from different linguistic paradigms. I have adopted the metaphor of the life cycle because I want to stress the commonalities in evolutionary trajectories (life stages). However, as has been suggested for negation, the development of counterfactuals takes a spiral-like form, as counterfactual replacements (e.g. the CF indicative) are not exactly the same as what they replace (cf. the new usage of the pluperfect aspect). Developing counterfactuals also have a common starting point (i.e. past counterfactuality) and subsequent extension to non-past (present and sometimes future), after which loss of counterfactuality can take place but non-past temporal reference will be preserved (cf. Patard 2019). As such, we observe (as I discuss below and conclude) that the counterfactual optative and indicative have undergone the same temporal trajectory, as evidenced by the replacements of the counterfactual optative by the indicative (starting when

starts out as counterfactual past but soon after encroaches on the present and ultimately the future, temporal domains of counterfactuality which the optative is ultimately forced to leave for purposes of functional economy. Similarly, this scenario explains why we find the CF optative in Archaic Greek still being used on some occasions for past counterfactuality, which thus cannot be an independent development of Greek (*pace* Hettrich 1998: 266).

This paper is structured as follows: section 2 defines the concepts used in this study such as tense, aspect, actionality, temporal reference and the cross-linguistic life cycle of counterfactuals more generally; sections 3 to 6 assess the history of CF mood forms in, respectively, de-activated illocutions (i.e. subordinate clauses) (3), declarative illocutions in the past indicative with ἄν/κε(ν) (4), interrogative illocutions with ἄν/κε(ν) (5), and wish illocutions (6). The main reason that I discuss the evolution of different illocutions separately is that we can observe the difference in rate of temporal extension among them and thus assess the role played by illocution in this regard. Note that the perspective taken on CF mood will be on Ancient Greek, but the findings, especially on the diachrony of the optative mood, may have implications for the evolutionary trajectory of the optative from PIE (see section 7). Also, the study of the development of counterfactuals which combines the dimensions of aspect and actionality may benefit the study of counterfactuals more generally. Section 7 sums up the main findings with regards to counterfactuals and discusses future avenues of research. The data for this paper was collected using the Thesaurus Linguae Graecae. Whereas my data covers most of the available evidence for Archaic Greek (i.e. the *Iliad*, *Odyssey*, Homeric Hymns and Hesiod),⁸ For obvious reasons of scope, I have been able to analyze only the vast majority, rather than the entirety, of the Classical Greek evidence (i.e. the histories of Herodotus, Thucydides and Xenophon, the tragedies of Aeschylus, Sophocles and Euripides, the comedies of Aristophanes, Plato's authentic philosophical works and the speeches of Lysias, Demosthenes, Isaeus and Isocrates).⁹

they occur together in the same clause in Homer) and the loss of counterfactuality by the optative to refer to non-counterfactual non-past (e.g. realizable wishes or potential statements).

8 Initially I used the appendix provided by Willmott (2007), but comparing the occurrences recorded by her showed that her appendix is not always exhaustive. To illustrate, she records 141 examples of the wish optative in a main clause, but my corpus contains 229 examples. She also records 139 examples of the optative in conditionals, but my corpus contains 156.

9 Since this data is based on collocation searches within a set distance (e.g. past indicative and ἄν five words apart or conditional subordinator and past indicative seven words apart) and subsequently sifting through all the cases, I cannot claim to be exhaustive for Classical Greek in its entirety. However, due to my large corpus and the relatively broad distance parameters, it is expected to cover the vast majority of the examples in Classical Greek.

2 The cross-linguistic life cycle of counterfactuals

A state of affairs is counterfactual when the condition for realization is deemed unrealizable in the past, present or future *by the speaker* (cf. Declerck & Reed (2001: 479) who define counterfactuality as a state of affairs “which is assumed by the speaker to be different from (incompatible with) the actual world.”) Examples from English are (i) *she would have done it, if he had not stopped her* [i.e. she was stopped so she did not], (ii) *why would he have wanted that?* [i.e. he did not want that], (iii) *if only she were here* [but I think that she cannot be] ..., (iv) *he should (have) know(n)* [but did/does not], (v) *if you had come tomorrow instead of today, you would have found me at home*. As the examples reveal, the condition for realization which is unrealizable to the speaker may but need not be formulated explicitly in the preceding (as in iv) or following (as in i) linguistic common ground (e.g. with a conditional clause, participle, wish clause, etc.). The common ground comprises “the sum of [interlocutors’] mutual, common or joint knowledge beliefs, and suppositions” (Clark 1996: 96). Roughly three types of common ground can be distinguished: (1) communal: shared cultural knowledge and values, social practices, shared attitudes or conventional human behavior; (2) physical personal: joint experience (of any kind) of the physical domain of interaction; (3) personal linguistic: information, views, ideas shared in prior interaction.

Counterfactuals manifest a reversal of the polarity marked in the sentence in which they occur (van Linden & Verstraete 2008), e.g. *If/I wish I was hiking ...*, implying I was/am not hiking. Although CF states of affairs often concern events which in fact did not happen (i.e. unrealized past events), they need not do so and therefore unrealized should not be taken as a distinctive characteristic of counterfactuals (*pace* Allan 2013: 23). The point for speakers to entertain CF worlds is to stress that *to the speaker* they are unrealizable *at the moment concerned*, e.g. *If World War I had started after World War II* = this of course could not be realized in the past, *I wish she were coming round today* = this unfortunately cannot be realized today I suppose, or *if he had come tomorrow instead of today, he would have found me at home* = I suggest that this certainly cannot be realized in the future (!). In other words, counterfactuals entertain lost possibilities. After all, it can be the case that it is just the speaker who is making it out to be a CF state of affairs: (indirect inferential¹⁰) *if I were guilty, they would have convicted me by now*

¹⁰ I adopt the term from Declerck & Reed 2001: 61: “an inferential conditional in which the inference goes from Q to P. The communicative purpose of an indirect inferential is to make the hearer draw an inference about the truth of P.”

= convicting me is evidently unrealizable and therefore my being guilty also (in the eyes of the speaker at least).

From a cross-linguistic perspective, multiple linguistic categories (e.g. mood, modality, tense, aspect) combine into a CF meaning and it is typically the combination of the past (and its aspect) with a certain ‘modal’ element that creates CF constructions historically (see Dahl 1997 and van Linden & Verstraete 2008: 1869–1874). The CF implicature generally has its source in a quantity implicature which the combination of a past and ‘modal’ element generates, meaning that the choice to mention a past potentiality invites the interpretation that the state of affairs was unrealizable (Ziegeler 2000: 32–34 and for Ancient Greek Wakker 2006b: 301). From a pragmatic perspective, the use of the past to express such a state of affairs is understandable, since the past is a typically known reality which can be used as a point of departure for CF reasoning (van Linden & Verstraete 2008: 1879).¹¹ This also explains why we do not need a category of ‘past potential’ often mentioned by our grammars, since such a category could only exist if the past were not known.¹² Although many previous studies have limited themselves to CF conditionals¹³ (and sometimes wishes¹⁴), counterfactuals are found across syntactic environments, not only in finite main clauses and subordinate clauses with different illocutions (e.g. declarative, interrogative, wish, de-activated) but also in non-finite environments (see Yong 2016 and compare the CF infinitives and participle with ἄν in Classical Greek).

Furthermore, counterfactuals are a quintessential candidate for underlining how necessary it is to keep the dimensions of tense, grammatical aspect, semantic actionality in clausal context (e.g. atelic ‘I live’ or ‘we talk’ vs. telic ‘we walk to the agora’ or ‘he died yesterday’) and, especially, temporal reference separate.¹⁵

11 This goes against previous arguments which stated, in what may be called a conceptualist approach, that the past expresses epistemic distance from the present and therefore is used for counterfactuals (see James 1982; Fleischman 1987; Langacker 1987; and applied to Ancient Greek, Allan 2013: 35).

12 Of course, speakers can signal that they are unsure about specific aspects about the past, e.g. *maybe came to the office yesterday*.

13 For example, typologies of counterfactuals have been derived from studies only dealing with CF conditionals (e.g. Bjorkman & Halpert 2017). Thus, in the terms of Haspelmath 2010, the comparative concept of counterfactuality has been confused with these language-specific descriptive categories even though we know from previous research that counterfactuality is associated with other descriptive categories as well.

14 Iatridou (2000: 231) limits counterfactuality to wishes and conditions.

15 I follow Bertinetto & Delfitto 2000: 190f. in distinguishing between tense (e.g. past, present, future), grammatical aspect (e.g. perfective, imperfective, perfect) and actionality in its clausal context (e.g. atelic vs. telic or stative, activity, accomplishment and achievement), as determined by

The main reason for this is that counterfactuals defy existing predictions about certain tenses or aspects having fixed or at least expected temporal references. As a result, present-referring counterfactuals that use a tense and aspect typically used to refer to the past (e.g. a past tense with perfective aspect) are often said to have fake tense and/or fake aspect (e.g. Iatridou 2000), since the tense and/or aspect do not function the way expected by linguists. More recently the discussion of such occurrences has been reframed in a diachronic manner: past tense and its grammatical aspect start out as counterfactuals in the past where they still contribute referential meaning, but over time such past counterfactuals extend to present counterfactuals (and sometimes future counterfactuals¹⁶) where the relevance of the past tense and aspect changes (see Yong 2018).

The diachronic data available from Archaic and Classical Greek provide a welcome test-case to pinpoint the relevance of tense, grammatical aspect and also actionality when counterfactuals change temporal reference over time. In fact, as I show, the diachronic evidence from Ancient Greek has on several occasions been misrepresented to suggest that imperfects in Classical Greek always refer to the present, which they evidently do not (see Wakker 1994: 146–150; contra Beck et al. 2012; and Yong 2018: 190). Such misrepresentations fit in with false generalizations about the relationship between counterfactuals and tense-aspect in existing literature, which have been gradually refuted by studies that contradict them. To name a few, counterfactuals are not just CF by virtue of a past tense (see above), nor due to a cross-linguistic link with the imperfective (contra Fleischman 1995; Bjorkman & Halpert 2017), nor only expressed with past tenses (but also by the present in specific contexts, see Haiman & Kuteva 2002), nor, finally, are counterfactuals limited to past and present temporal reference (see Wakker 1994: 158 note 72; Dahl 1997: 106f.; Declerck & Reed 2001: 179–182). By contrast, as I discuss below, CF indicative forms in Classical Greek, whether they consist of an aorist, imperfect or perfect aspect (i.e. the pluperfect), can refer to the past, present and the future. In sum, the Ancient Greek data can provide numerous insights into the development of tense-aspect in counterfactuals diachronically.

its clausal context. As I discuss below, these domains crucially need to be kept separate to describe CFs, since CFs may be in the past tense with a perfective aspect but refer to the present, thus going against expected past temporal reference for the combination of past tense and perfective aspect. **16** Future CFs do exist as already suggested by Wakker (1994: 158 note 72): “There may be philosophical objections to equating future time and counterfactuality, since, in an absolute sense, it may be impossible to utter any prediction in the knowledge that it will prove false (CF). But what matters for language (and the particular means of expression selected) is the speaker’s presupposition at the time of utterance.” See also the discussion by Iatridou (2000: 253) and Declerck & Reed (2001: 179–181).

Therefore, this paper adopts the more nuanced diachronic alternative of *life cycles*. The idea of a life cycle of counterfactuals was initially developed by Dahl (1997) who noticed that counterfactuals start their life as past counterfactuals and over time relax their temporal reference to the present and that other constructions such as the pluperfect are eventually recruited into the CF system of Germanic languages. Subsequently, Yong (2016; 2018) further developed this framework using a cross-linguistic diachronic study of CF markers and proposed a cross-linguistic life cycle. Patard (2019) similarly observed that counterfactual markers start out as optional alternatives to express past counterfactuality with the help of pragmatic contexts, after which they extend to non-past counterfactuality and eventually lose their counterfactuality after extended usage. As a result, another form will be grafted into the system to express counterfactuality, starting with past counterfactuality. The three key features in this conception of the cross-linguistic life cycle of counterfactuals are (1) that the role of pragmatic context (e.g. contextual cues, optionality, cancellability of the CF implicature) is needed to assess the creation of CF constructions, (2) that changing temporal reference can be used to track their development through time (as, I argue, from past to non-past), and (3) that the counterfactual form, when spread fully, may lose its counterfactuality due to extensive usage (as I think happened to the optative). Still, this life cycle leaves us with questions such as what is the role of actionality of the state of affairs, what is the significance of different pragmatic types of counterfactuals, and how does the aspectual system of a language such as Ancient Greek affect these evolutions? Moreover, the cross-linguistic life cycle does not seem to take into account usage in different illocutions or even constructions, but, as I show, the pace of temporal reference extensions differs per illocution. I address such matters in this paper and thereby make a contribution towards a fine-grained understanding of the evolution of CF constructions.

3 Counterfactual mood forms in de-activated illocutions

This table illustrates that, on the one hand, CF optative and indicative forms were not limited to conditional clauses in Archaic Greek (although the literature has focused on them), and, on the other hand, the replacements display a clear directionality in the indicative CF mood form from past to present to future. In what follows I detail how the replacements must have taken place, starting with conditional clauses and then moving on to non-conditional subordinate clauses. The CF conditional and (Archaic Greek) comparative subordinate clauses (which

Table 2: CF mood forms and temporal reference in subordinate clauses in Ancient Greek

Clause type	Archaic Greek				Classical Greek	
	optative		indicative		indicative	
Conditional	Present, future	18	Past	93	Past, present, future	641
Comparative	Past, present	4	Past	3	Past, present	11
Causal	Present	1	Past	3	Past, present	5
Relative	x	x	Past	10	Past, present, future	46
ὄτι/ὡς clause	x	x	Past	1	Past, present	47
Indirect question	x	x	x	x	Past, present	15
Result	x	x	x	x	Past, present	7
Temporal	x	x	x	x	Past	1
Purpose	x	x	x	x	Past	1

are formed like conditionals with ὡς εἰ ‘as if’) distinguish themselves from the other subordinate clauses in that they do not require a modal particle whereas the others do,¹⁷ for which see Table 1 above and *Il.* 19.17 and *Od.* 17.366.

CF conditionals with the optative in Archaic Greek have a wider temporal reference range than has been acknowledged, as we find CF optative forms referring to the present (12, example 1) as well as to the future (6, example 2). In example (1), Telemachus assumes Odysseus has died (see line 166) which makes it impossible for the suitors to see him return now, as expressed by the present-referring CF optative (cf. the confirmation of the counterfactuality with the $\nu\tilde{\nu}\delta'$ clause). In example (2), Hector considers a CF future¹⁸ where he and Glaukos would be ageless and immortal, something which can obviously not be realized since they are human (cf. the contrast provided with the factual now $\nu\tilde{\nu}\delta'$).

¹⁷ Please note that I cannot discuss those cases here which fall under the traditional header of mood attraction. In those cases, due to counterfactuality of the preceding clause (main or subordinate as matrix clause) the subordinate clause is CF without needing a modal particle, cf. Napoli 2014. This matter lies outside the scope of this paper. See, however, note 35 and la Roi submitted(a) for a novel interpretation of counterfactual mood attraction and mood (a)symmetry in Archaic and Classical Greek. Furthermore, there are 6 cases where $\check{\nu}\nu$ is absent but we are not dealing with mood attraction. In those cases we find the combination of a past tense with a scalar marker such as ‘almost’ (e.g. ὀλίγου in *Hdt.* 7.10.29 or *Ar.* V. 829). Such combinations can also generate a CF implicature as they signal that what nearly happened was for some unexpressed reason unable to take place, but they are restricted to the past. See the analysis of the differences and similarities of this construction with CF constructions provided by la Roi (submitted[b]).

¹⁸ Note that this category is not limited to occurrences with $\mu\acute{\epsilon}\lambda\lambda\omega$, e.g. *Od.* 12.78, which underlines that it is the optative which has CF future reference in this context.

(1) *Present-referring CF optative*

εἰ κείνόν γ' Ἰθάκηνδε ἰδοῖατο νοστήσαντα,
 πάντες κ' ἄρησάιατ' ἔλαφρότεροι πόδας εἶναι
 ἢ ἀφνειότεροι χρυσοῖο τε ἐσθῆτός τε.
 νῦν δ' ὁ μὲν ὧς ἀπόλωλε κακὸν μόνον,

'If they **saw** him returned to Ithaca, they would all pray to be swifter of foot, rather than richer in gold and in raiment. But now he has thus perished by an evil doom'¹⁹

Od. 1.163–166

(2) *Future-referring CF optative*

ὦ πέπον εἰ μὲν γὰρ πόλεμον περὶ τόνδε φυγόντε
 αἰεὶ δὴ μέλλοιμεν ἀγήρω τ' ἀθανάτω τε
 ἔσσεσθ', οὔτέ κεν αὐτὸς ἐνὶ πρώτοισι μαχοίμην
 οὔτε κε σὲ στέλλοιμι μάχην ἐς κυδιάνειραν·
 νῦν δ' ἔμπης γὰρ κήρες ἐφεστᾶσιν θανάτοιο
 μυρία, ἃς οὐκ ἔστι φυγεῖν βροτὸν οὐδ' ὑπαλύξαι

'Ah friend, **if** once escaped from this battle **we were for ever to be** ageless and immortal, neither should I myself fight among the foremost, nor should I send you into battle where men win glory; *but now*—for in any case fates of death threaten us, fates past counting, which no mortal may escape or avoid'

Il. 12.322–327

Examples such as these differ in multiple ways from the following two which we also find in Archaic Greek. Example (3) and (4), on the one hand, show innovative mood forms: a mix of a CF optative mood form (ἀπόλοιτο) with an indicative (νόησε) referring to the past in example (3) and the innovative CF indicative combination (ἄκουσε and ἄραξ) referring to the past. On the other hand, I argue, they represent different pragmatic types of conditionals. Examples (1), (2) and (4) present a so-called predictive CF conditional which predicts actualization of the matrix clause, implying that if the proposition in the conditional clause is realized, the proposition in the matrix clause will also be realized (Dancygier 2006: 25–61; la Roi submitted(c)). Thus, a causality is expressed between a CF situation in the conditional clause and its matrix clause and the temporal order between *p* and *q* displays sequentiality as it is iconic of how the events would have taken place (cf. Dancygier 2006: 73). In example 3, however, I suggest that we are dealing with a direct inferential CF conditional from the voice of the Homeric narrator. Direct inferential conditionals use the truth of *p* to prove the truth of *q*, e.g. *If my mum*

¹⁹ The translations are based on the most recent Loeb translations. The texts are those in the *Thesaurus Linguae Graecae*. In some clear instances of morphosyntactic innovation I also consulted the editions to check for manuscript variation (see below).

is right, my dad is at home (Declerck & Reed 2001: 42–44). Such conditionals do not display temporal sequentiality, as the event in the conditional can precede the event in the matrix clause. In example (3) the Homeric narrator infers that the fact that Aphrodite had noticed (νόησε) in fact prevented the death of Aeneas. In other words, he wants the addressee to believe that Aeneas would have died and uses the truth of the proposition in the postposed conditional (i.e. Aphrodite was quick to notice) to assert that. After all, the event in the conditional precedes the event in the matrix clause, unlike in predictive conditionals.

(3) *Past-referring CF indicative*

καὶ νῦ κεν ἔνθ' ἀπόλοιτο ἄναξ ἀνδρῶν Αἰνείας,
εἰ μὴ ἄρ' ὄξυ νόησε Διὸς θυγάτηρ Ἀφροδίτη
 μήτηρ, ἣ μιν ὑπ' Ἀγχίση τέκε βουκολέοντι:

‘And now would the lord of men, Aeneas, have perished, **had not** the daughter of Zeus, Aphrodite, **been quick to notice**, his mother, who conceived him to Anchises as he tended his cattle.’
Il. 5.311–313

(4) *Past-referring CF indicative*

εἰ δὲ φθεγξαμένου τευ ἢ αὐδήσαντος ἄκουσε,
 σύν κεν ἄραξ' ἡμέων κεφαλὰς καὶ νήια δοῦρα
 μαρμάρῳ ὀκρίονεντι βαλῶν: τόσσον γὰρ ἴησιν.

‘And **had he heard** one of us uttering a sound or speaking, he would have hurled a jagged rock and crushed our heads and the timbers of our ship, so strongly does he throw.’
Od. 9.497–499

Although it has been observed that such εἰ μὴ CF conditionals with the indicative (as in 3) are overrepresented in Homer, a direct explanation for this or a precise relative chronology has not been given (except that these are somehow the starting point of an evolution of counterfactual mood).²⁰ I propose that such CF conditionals (with *if not*, but also *but* or *now*)²¹ provide the bridging context for the replacement of the CF optative by the indicative in conditionals. The reason that we find this so-called bridging context,²² a context in which a new target meaning

²⁰ In fact, it is often assumed that the CF indicative replacement in the conditional was the source for the CF indicative replacement in the main clause; but, since the CF indicative in the declarative main clause, as I show below, could already refer to the present in Archaic Greek, this is an unlikely scenario contra Stahl 1907: 280f. Hettrich 1998; De Decker 2015: 240.

²¹ Examples that do not use εἰ μὴ are *Il.* 5.22, 16.848 (main clause followed by ἀλλ'), *Od.* 5.311 (a following main clause with νῦν) or *Il.* 16.618 (εἰ with past indicative follows).

²² For the concept of the bridging context I refer to Heine 2002. La Roi 2020a provides an application of the concept to changes in the syntax of Ancient Greek complementation.

provides a more likely interpretation of the marker than the older source meaning (Heine 2002: 83–101), so exceptionally often is that it is a favorite narrative strategy of the Homeric narrator to play with the expectations of the audience, for which see de Jong 1987 and Bouxsein 2020. The reason that they provide the bridging context is that such contexts conform to the first phase of the life cycle of counterfactuals where a form is employed in the CF sentences with past time reference and implies counterfactuality with the help of pragmatic contexts (dependence on a condition known to be false). The concept of bridging context also explains the mix with the more archaic CF optative in the preceding matrix clause. Example (4), then, represents the most innovative combination, since CF indicative forms are combined in a predictive CF, not a direct inferential with the help of pragmatic cues. The innovative predictive combination in (4) represents the next stage of the life cycle of the CF indicative where the generated counterfactuality of the CF indicative is less influenced by pragmatic inference. Note that there are 10 such innovative combinations in predictive use of the CF indicative in Archaic Greek (as example 4)²³ and only two in the more archaic combination with the CF optative (i.e. *Il.* 2.80 and 24.220). In fact, these two more archaic combinations with CF optative share, besides referring more archaically to the past, the same formula (see example 14 below),²⁴ which corroborates their older age.²⁵ Thus, I argue, this overall distribution points up the fact that the replacement of the CF optative was already very much on its way in Archaic Greek.

In Classical Greek CF conditionals, the situation is considerably more complex, especially with regard to the relationship between aspect and temporal reference, as illustrated by Table 3.

Table 3: Temporal reference and tense-aspect of CF conditionals in Classical Greek

Tense-aspect	Temporal reference		
	Past	Present	Future
Past aorist	151 (90%)	17 (10%)	0
Past imperfect	161 (36%)	283 (63%)	4 (1%)
Past pluperfect	16 (64%)	9 (36%)	0

²³ The other examples are *Il.* 8.366, 11.67, 16.686, 16.847, 23.526, *Od.* 4.732, 4.497, 23.22, 24.284.

²⁴ The relation between formulas and diachronic change is a complex one, which space prevents me from fleshing out here. However, for an up-to-date account on this relationship, see Bozzone 2014.

²⁵ Note, however, that the editions used here, by Allen and von der Mühl, do not report manuscript variation for these formulas archaic and innovative formulas.

The data in the table reveals that every past tense-aspect combination can be used for present-referring counterfactuality in Classical Greek, thereby making existing generalizations in the secondary literature that an aspect is usually limited to one temporal reference (e.g. aorist to past and imperfect and pluperfect to present²⁶) yet more unattractive.²⁷ Instead, what distinguishes the use of tense-aspects in CF conditionals is their distributional patterns. The past aorist displays the strongest distributional skew, that is, preference for expressing past counterfactuals, as in example (5). From an aspectual viewpoint, the choice for a perfective construal of this past state of affairs may be explained as the unmarked choice,²⁸ since the aorist aspect construes an event with a focus on its boundaries. Thus, there is a semantic affinity between perfective construal and past temporal reference, since events from the past are typically delineated clearly in terms of their temporal boundaries.²⁹ In example (5), the aspectual viewpoint focuses on the boundaries of the past event of surviving.

(5) *Past-referring CF indicative*

Orestes εἰ μόνος ἐσώθη, μᾶλλον ἂν ζηλωτὸς ἦν.

'Had he returned alone in safety, his fate would have been more enviable'

E. Or. 246

By contrast, as shown in table 3, the imperfect and pluperfect show less strong preferences, for, respectively, the present and the past. The preference for the present by the imperfect may be explained as the result of aspectual viewpoint as well, since the imperfect views an event without focusing on its temporal boundaries. It is not the fact that the living may have started in the past that is focused on, but the fact that life is currently continued. By contrast, with the pluperfects³⁰ in

²⁶ Contra Wakker (1994: 146), as the pluperfect has a preference for the past, not the present. For literature on the controversial reconstruction of the pluperfect in PIE, see Willi 2018: 220–285.

²⁷ E.g. van Emde Boas et al. (2019: 443) state that the imperfect and aorist are “usually” used with reference to the present and past respectively, but I believe that the distributional patterns evidenced here and below urge us to tread with more caution than the qualification with “usually” would suggest.

²⁸ For a unified account of Ancient Greek aspect in marked situations (e.g. imperfect for completed events) and unmarked situations (e.g. imperfect for uncompleted events), see Allan 2017.

²⁹ I would not say that with aorist CFs the aorist indicates that “the decision about the non-realization of a SoA in the past was already taken at some earlier moment” (Wakker 1994: 146).

³⁰ Note that this group comprises both synthetic and periphrastic pluperfects, e.g. ἦν πεποιηκὼς Isoc. 18.19.3, ἦν τεθνηκὼς A. Ag. 869 versus example (7).

example (7), the aspectual viewpoint is on the past boundary leading to a past state of affairs that follows from it, thus fitting a past temporal reference.³¹

(6) *Present-referring CF indicative*

Jason [...] εἰ δὲ γῆς ἐπ' ἑσχάτοις
ὄροισιν ὤικεις, οὐκ ἂν ἦν λόγος σέθεν

'But **if you lived** at the world's edge, there would be no talk of you.'

E. *Med.* 539f.

(7) *Past-referring CF indicative*

οὐ γὰρ Αἰσχίνης ὑπὲρ τῆς εἰρήνης κρίνεται, οὐ, ἀλλ' ἡ εἰρήνη δι' Αἰσχίνην διαβέβληται. σημείον δέ: εἰ γὰρ ἡ μὲν εἰρήνη ἐγεγόνει, μηδὲν δ' ὕστερον ἐξηπάτησθ' ὑμεῖς μηδ' ἀπωλώλει τῶν συμμάχων μηδεῖς, τίν' ἀνθρώπων ἐλύπησεν ἂν ἡ εἰρήνη, ἕξω τοῦ ἄδοξος γεγενῆσθαι; καίτοι καὶ τοῦτου συναίτιος οὗτος συνειπῶν Φιλοκράτει.

'Aeschines is not on trial for the peace; the peace is discredited through Aeschines. That is easily proved. **Suppose that** the peace **had been concluded**, and that you had not thereafter been deluded, and none of your allies **destroyed**—what human being would the peace have aggrieved? I mean, apart from the consideration that it was not a glorious peace. For that fault Aeschines is indeed partly to blame, as he supported Philocrates.'

D. 19.974–10

However, a critical look at table 3 and the prototypical examples given above sparks the question how we should account for less prototypical examples in my corpus (e.g. imperfect for CF past, pluperfect or aorist for CF present). Therefore I give their relative distribution in table 4 with respect to their temporal reference and a specific aspectual form so that we can determine the role of actionality across the different temporal references. To be sure, the diachrony of aspect appears to be the most important explanation for these distributional patterns, since the diachronic extension from past-referring to present-referring and future-referring is constrained by systemic factors of aspectual semantics. This means that the imperfect viewpoint more easily allows for the temporal implicature to extend from the past to the present diachronically, whereas this extension is more constrained by the aspectual viewpoint of the perfective and, to a lesser degree, the perfect. Also relevant however is the role of actionality, since the prototypical examples given in 5, 6 and 7 have a state of affairs with a telicity that fits their aspectual

³¹ Cf. van Emde Boas et al. 2019: 423: "The pluperfect expresses that at a moment in the past a state existed as the result of a previous action, or that the effects of a previous action were still in force and relevant at that moment in the past."

viewpoint and, I would suggest, by implication their temporal reference: telic aorist in past-referring CF 5, atelic imperfect in present-referring CF 6, telic pluperfect in past-referring CF 7. When we also take into consideration the parameter of actionality (which has not been done for Ancient Greek counterfactuals yet),³² we observe in table 4 that especially atelic states of affairs (e.g. stative ἔζη ‘he lived’ in example 8) allow extension into present temporal reference. Another piece of evidence in support of the combined role played by aspect first and telicity second lies in the frequency of present-referring CF conditionals: the total number of those present-referring counterfactuals in the aorist and pluperfect are smaller than the past-referring ones, firstly due to aspect (compare the number of present-referring imperfects) and secondly due to telicity, i.e. present-referring telic aorists and pluperfects being the least frequent of them all, even for present-referring telic *imperfects*.³³

Table 4: Temporal reference and actionality of CF conditionals in Classical Greek

Tense-aspect		Temporal reference		
		Past	Present	Future
Aorist	telic	81 (54%)	5 (29%)	0
	atelic	70 (46%)	12 (71%)	0
Imperfect	telic	12 (7%)	11 (4%)	0
	atelic	149 (93%)	272 (96%)	4 (100% of present)
Pluperfect	telic	10 (63%)	2 (22%)	0
	atelic	6 (37%)	7 (78%)	0

From the perspective of actionality, this distribution may come as no surprise since atelic states of affairs describe an unbounded state of affairs which, due to their being unbounded, can last from the past into the present and even the future (see the last column), as illustrated by examples 8 and 9. In example 8, Socrates entertains the CF situation where Protagoras who was alive before but died is still alive now, whereas in example 9 the speaker entertains the CF situation in the future that another court will pass judgment than the predetermined one. Atelic states of affairs are thus most probably the initial candidates for those extensions, after which telic states of affairs follow (see section 4 below on declarative CF

³² However, for suggestions on the role of actionality in the distribution of aspect more generally in Homeric Greek, see Napoli 2006 and García Ramón 2012.

³³ E.g. Pl. *Men.* 74c9 καὶ εἴ γέ σε ἐκέλευε λέγειν ἄλλα χρώματα, ἔλεγες ἂν ἄλλα ...; “and if he ordered you to mention other colours, you would tell him others ...?”

indicatives for more such evidence). Moreover, the majority of states of affairs referring to the present are atelic: 291 out of 309 = 94% of present-referring CF conditionals. In contrast to present temporal reference, telicity does not play as much of a decisive role for those CF with past temporal reference as witnessed by the varying percentages. Further evidence of a more central role of aspect for past counterfactuality could be that in Archaic Greek CF indicative conditionals which all refer to the past the majority are aorist: aorist 69 (74%), imperfect 20 (22%) and pluperfect 4 (9%).

(8) *Present-referring CF indicative*

ταῦτα, ὦ Θεόδωρε, τῷ ἐταίρῳ σου εἰς βοήθειαν προσηρξάμην κατ' ἐμὴν δύναμιν σμικρὰ ἀπὸ σμικρῶν· εἰ δ' αὐτὸς ἔζη, μεγαλειότερον ἂν τοῖς αὐτοῦ ἐβοήθησεν.

'Such, Theodoras, is the help I have furnished your friend to the best of my ability—not much, for my resources are small; but **if he were living** himself he would have helped his offspring in a fashion more magnificent'

Pl. *Tht.* 168c1–5

(9) *Future-referring CF indicative*

Πολλὰ καὶ δεινὰ συνειδῶς Σίμωνι, ὦ βουλή, οὐκ ἂν ποτ' αὐτὸν εἰς τοσοῦτον τόλμης ἠγησάμην ἀφικέσθαι, ὥστε ὑπὲρ ὧν αὐτὸν ἔδει δοῦναί δίκην, ὑπὲρ τούτων ὡς ἀδικούμενον ἔγκλημα ποιήσασθαι καὶ οὕτω μέγαν καὶ σεμνὸν ὄρκον διομοσάμενον εἰς ὑμᾶς ἐλθεῖν. εἰ μὲν οὖν ἄλλοι τινὲς ἔμελλον περὶ ἐμοῦ **διαγνώσεσθαι**, σφόδρα ἂν ἐφοβούμην τὸν κίνδυνον, ὁρῶν ὅτι καὶ παρασκευαὶ καὶ τύχαι ἐνίοτε τοιαῦται γίνονται, ὥστε πολλὰ καὶ παρὰ γνώμην ἀποβαίνειν τοῖς κινδυνεύουσιν· εἰς ὑμᾶς δ' εἰσελθὼν ἐλπίζω τῶν δικαίων τεύξεσθαι.

'Although I was aware of much that was outrageous about Simon, gentlemen of the Council, I did not believe that he would ever have carried audacity to the pitch of lodging a complaint as the injured party in a case where he was the person who should be punished, and of taking that great and solemn affidavit and so coming before you. Now if it were any other court that **was to judge** me, I should be terrified by the danger, considering what strange machinations and chances occur at times to cause a variety of surprises to those who are standing their trial: but as it is before you that I appear, I hope to obtain justice.'

Lys. 3.1.1–3.2.5

Finally, the distribution of telicity in past CF conditionals is influenced by synchronic constraints such as contextual (e.g. past temporal cues such as πάλα

or τότε³⁴) and contextual factors (i.e. is the event concerned known as past or present, cf. Wakker 1994: 148) which also codetermine temporal reference in CF conditionals, in addition to grammatical aspect. For this phenomenon, see example 10 where a past imperfect locates an atelic state of affairs in the past because it is known to have happened in the past.

(10) *Past-referring CF indicative*

Εἰ γὰρ μετὰ τὴν μάχην ἦν ἐνίκησαν Θηβαῖοι Λακεδαιμονίους, ἐκεῖνοι μὲν ἐλευθερώσαντες τὴν Πελοπόννησον καὶ τοὺς ἄλλους αὐτονόμους ποιήσαντες **ἡσυχίαν εἶχον**, ἡμεῖς δὲ τοιαῦτ' ἐξημαρτόνομεν, οὐτ' ἂν οὗτος ἔσχεν ταύτην ποιήσασθαι τὴν ἐρώτησιν, ἡμεῖς τ' ἂν ἔγνωμεν ὅσῳ κρεῖττον ἔστιν τὸ σωφρονεῖν τοῦ πολυπραγμονεῖν.

'For example, **if** the Thebans, **after the battle which they won** over the Lacedaemonians, **had contented themselves** with liberating the Peloponnesus and making the other Hellenes independent and had thenceforth **kept their peace**, while we continued to make such blunders, then neither could this man have asked such a question nor could we ourselves have failed to realize how much better moderation is than meddlesomeness.'

Isoc. 8.58.1–7

In fact, when one reconsiders example (8) and (9) from this perspective, one can observe that for these examples too, contextual knowledge plays a role, since for (8) Protagoras cannot be alive anymore now because it is known that he is dead, and for (9) it is predetermined that the court addressed will decide the matter at hand in the future, not another one as in the CF future scenario.

Let us now move on to non-conditional counterfactuals in subordinate clauses with a modal particle. In Table 5 (= Table 2) we observe the same temporal reference distribution as CF indicative conditionals in Archaic Greek for other clause types. Also, the higher number of CF indicatives in Archaic Greek reveals that it was already in strong competition with the CF optative and in some cases had already taken over past temporal reference, although the corpus evidence cannot verify all these matters. Note also that, in contrast to for example the CF conditional clause (and comparative clause in Archaic Greek, see Table 1), the other CF subordinate clauses must have a modal particle to mark their counterfactuality.³⁵

³⁴ For further examples of past CF conditionals with temporal cues, see D. 19.103.5, 36.35.5, 54.28.4, Th. 3.39.5.1.

³⁵ The fact that my corpus contains little evidence from CF temporal and purpose clauses, I think, is related to this distributional rule. Because temporal and purpose clauses following a CF matrix clause in Classical Greek directly relate to the CF world presented in the matrix clause,

Table 5: Counterfactuals in de-activated illocutions in Archaic and Classical Greek

Clause type	Archaic Greek				Classical Greek	
	optative		indicative		indicative	
Conditional	Present, future	18	Past	93	Past, present, future	641
Comparative	Past, present	4	Past	3	Past, present	11
Causal	Present	1	Past	3	Past, present	5
Relative	x	x	Past	10	Past, present, future	46
ᾄτι/ὥς clause	x	x	Past	1	Past, present	47
Indirect question	x	x	x	x	Past, present	15
Result	x	x	x	x	Past, present	7
Temporal	x	x	x	x	Past	1
Purpose	x	x	x	x	Past	1

The CF optative still had a wider temporal reference range in de-activated illocutions in Archaic Greek, which I believe is consistent with its more advanced position in the life cycle of CF mood. Accordingly, they are used with reference to both the past and the present in comparative, relative and causal clauses: past by 1 comparative clause, and present by 3 comparative³⁶ and 1 causal subordinate clause.³⁷ For an illustration see example 11, where Telemachus infers that he would have been less grieving now if his father Odysseus had died an honourable death (see the following CF conditional clause). As Telemachus thinks and says in the following lines, however, Odysseus instead got lost and died after the war.

I suggest that the CF implicature from the matrix clause (= either main or subordinate clause) transfers to the subordinate clause and generates what is traditionally called mood attraction (see Napoli 2014). This transfer of CF implicature, e.g. *If only he would have(=CF), until/so that he would have(=CF iff belonging to the same CF world) or if he had money so that he could buy it(=CF iff belonging to the same CF world) he would be much happier*, makes the presence of a modal particle unnecessary. See la Roi submitted(a).

36 These comparative CFs serve specific narrative effects: something impressive happens/ed as if ... (e.g. *Od.* 17.366; *Il.* 2.780).

37 The examples are, respectively, *Od.* 17.366 (past-referring comparative clause); *Il.* 2.780, *Od.* 10.416, 10.420 (present-referring comparative clause); *Od.* 1.236 (present-referring causal clause).

(11) *Present-referring CF optative*

νῦν δ' ἐτέρως ἐβόλοντο θεοὶ κακὰ μητιόωντες, οἳ κεῖνον μὲν ἄϊστον ἐποίησαν περὶ πάντων ἀνθρώπων, ἐπεὶ οὐ κε θανόντι περ ὧδ' ἀκαχοίμην, εἰ μετὰ οἷσ' ἐτάροισι δάμη Τρώων ἐνὶ δήμῳ, ἢ ἐ φίλων ἐν χερσίν, ἐπεὶ πόλεμον τολύπευσε.

'But now the gods have willed otherwise in their evil devising, seeing that they have caused him to pass from sight as they have no other man, for I **should not so grieve** for his death, *if he had been slain* among his comrades in the land of the Trojans, or had died in the arms of his friends, when he had wound up the skein of war.'

Od. 1.234–238

The table also reveals that there is functional overlap between the CF optative and indicative which is to be expected in cases where a construction is replaced through language change and as is illustrated by relative CF clauses referring to the past. The 'contemporary' overlap must have been considerably more complex, but Archaic Greek texts only offer partial evidence for this.

Furthermore, there are some factors of change that the table might obscure. Firstly, CF indicatives in de-activated illocutions also exist which are partly the result of other historical changes. We sometimes find CF modals in the indicative: ἔμελλον (*Il.* 18.98) in a CF causal clause, ὄφελος (*Od.* 2.184) in a CF comparative clause. A different example is *Od.* 20.331, where we are dealing with a singular non-grammaticalized CF implicature with κέρδιον ἦεν "it would have been better" followed by a CF conditional with a past tense. Secondly, there is analogical expansion of the types of subordinate clauses in which the CF indicative mood with modal particle can be found in Archaic Greek, as shown by the extension to an indirect question (example 12).³⁸

³⁸ Two other pieces of corpus evidence, which space prevents me from elaborating on here, concern the augment and the modal particles in Archaic Greek. The evidence from CF indicatives in subordinate clauses suggests that the augment (despite being not fully stable in Archaic Greek) must have been more stable in referring to the past than previously assumed, because the majority of past CF indicatives in subordinate clauses are augmented (61% = 67 versus 39% = 47). This makes earlier suggestions that the augment is mostly absent from subordinate clauses as well as the explanation that counterfactuality is the reason for non-augmentation unattractive (*contra* De Decker 2018: 19). Perhaps we could interpret the majority use of augmented past indicatives in CF subordinate clauses as a sign of relative chronology in that these constructions were formed when the augment was already partly stable in referring to the past. Also from the perspective of analogy, this makes sense, since the past indicative had to refer to the past to be adopted for past counterfactuals. The debate about the augment is too big to summarize here, but I refer the reader to Joseph 2020: 923–927 for a short recent summary and the papers by Allan (2016); Nijk (2016); De Decker (2018) and Willi (2018: 357–416) for four different approaches to explaining the

(12) *Past-referring CF indicative*

τὸν δ' ἡμείβετ' ἔπειτα Γερήνιος ἱππότης Νέστωρ· “τοιγὰρ ἐγὼ τοι, τέκνον, ἀληθέα πάντ' ἀγορεύσω. ἦ τοι μὲν τόδε καυτὸς οἶεαι, **ὥς κεν ἐτύχθη**, εἰ ζῶοντ' Αἴγισθον ἐνὶ μεγάροισιν ἔτετμεν Ἀτρεΐδης Τροίηθεν ἰών, ξανθὸς Μενέλαος·

‘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.” *Od.* 3.253–257

In Classical Greek, CF indicatives in de-activated illocutions with a modal particle spread further to other subordinate clause types such as temporal, purpose, result and ὅτι/ὥς clauses, and even non-finite clause types (i.e. the participle or infinitive with the modal particle). They also extend their temporal reference accordingly. The past aorist is, as expected, used most often for past counterfactuality, but the past imperfect, on the other hand, has not extended its temporal reference as much to the present as conditional subordinate counterfactuals. For the past-referring pluperfect, there are not many examples in my corpus, making it hard to judge the distribution of tense-aspect.

Table 6: Tense-aspect in non-conditional subordinate clauses with ἄν in Classical Greek

Tense-aspect	Temporal reference		
	Past	Present	Future
Past aorist	70 (91%)	7 (9%)	0
Past imperfect	23 (50%)	23 (50%)	0
Past pluperfect	2 (40%)	3 (60%)	0

distribution and diachrony of the augment in Ancient Greek. With regards to the modal particle, on which see Colvin 2016, the modal particle of CF indicatives in these clause types is almost always κε(v) (10 times); ἄν only occurs twice (*Od.* 9.334 with κε and 13.137 by itself) and both times in relative clauses. Although the distribution of the two modal particles in Archaic Greek is rather complex and does not seem to stand in a direct relation with the mood usage (see Willmott 2007: 199–204), this distribution suggests that the modal particles must have already spread to the different mood usages when the CF indicative was created. In other words, it would be difficult to detect a difference in level of archaicity between the two for counterfactuals. After all, in CF indicative declaratives in Archaic Greek, which had developed further already, both modal particles occur as well as a strong preference for κε (134 vs 14 ἄν).

To sum up, the diachronic extensions of CF temporal reference to present and future reference for non-conditional subordinate clauses is not as far on its way in Classical Greek yet as in conditional subordinate clauses. However, there are considerable expansions to other subordinate clauses in Classical Greek which were not expressed by the CF indicative in Archaic Greek yet, e.g. temporal, purpose, result (see last column in Table 2 and Table 5 and note 35 above).

4 Counterfactual mood forms in declarative illocutions

Contrary to what is commonly stated in the secondary literature (e.g. Stahl 1907: 286; Chantraine 1953: 220), the optative could still be used in declarative illocutions in Archaic Greek to express past counterfactuality, as recorded by table 7 and examples 13 and 14. As signaled by Ruijgh (1992: 81–82) and Wakker (1994: 210 note 168) this usage might be considered an archaism, *pace* Hettrich (1998: 266), who sees this use as an innovation. The corpus evidence also points in this direction, because non-CF usages of the optative in declaratives (i.e. the so-called potential optative) are far more frequent with a total of 404 occurrences in Archaic Greek (in particular: 184 Iliad, 65 Odyssey, 27 Hesiod and 28 Homeric Hymns). Thus, this corpus evidence suggests that the CF optative was already strongly retreating in Archaic Greek.

Table 7: Diachronic distribution of CF mood forms in declaratives

	CF Mood forms		
	Optative	Indicative	
Main clause CF	Archaic Greek	Archaic Greek	Classical Greek
Past	18	146	309
Present	11	2	400
Future	11	0	2

Others have explained examples such as (13) as non-CF so-called past-potentials,³⁹ but, as convincingly argued by Wakker on several occasions, this distinction which we inherit from our standard grammars is not a linguistically valid one, since in context ‘past potentials’ have a CF implicature (see Wakker 1994: 156–166; Wakker

³⁹ *Pace* e.g. Goodwin 1889: 81–86; McKay 1981; Hettrich 1998: 267; De Decker 2015: 223.

2006b; Wakker 2006a). In example (13), the CF presupposition is that the addressee was there in the past to observe and speak, which is one of the known rhetorical tropes of the Homeric narrator.

(13) *Past-referring CF optative*

κέλευε δὲ οἷσιν ἕκαστος
 ἡγεμόνων· οἱ δ' ἄλλοι ἀκὴν ἴσαν, οὐδέ **κε φαίης**
 τόσσον λαὸν ἔπεσθαι ἔχοντ' ἐν στήθεσιν αὐδήν,
 σιγῇ δειδιότες σιμάντορας·

‘and each leader gave orders to his own men, and the rest marched on in silence; **you would have said** that they who followed in such multitudes had no voice in their breasts, all silent as they were through fear of their commanders’

Il. 4.428–431

In example (14), it wasn't someone else who told them the dream, so it would have been impossible for them to have spoken otherwise (cf. the subsequent past tense *νῦν δ' ἴδεν*):

(14) *Past-referring CF optative*

ὦ φίλοι Ἀργείων ἡγήτορες ἠδὲ μέδοντες
 εἰ μὲν τις τὸν ὄνειρον Ἀχαιῶν ἄλλος ἔνισπε
 ψευδός **κεν φαίμεν** καὶ **νοσφιζοίμεθα** μᾶλλον·
 νῦν δ' ἴδεν ὃς μέγ' ἄριστος Ἀχαιῶν εὖχεται εἶναι·
 ἀλλ' ἄγετ' αἴ κέν πως θωρήσομεν υἴας Ἀχαιῶν.

‘My friends, leaders and rulers of the Argives, if anyone else of the Achaeans *had told* us this dream, we **might have said** it was a lie and rather **turned away** from it; *but now he has seen it* who declares himself to be far the best of the Achaeans. But come, let us see if somehow we can arm the sons of the Achaeans.’

Il. 2.79–83

Such CF past-referring optatives challenge the dominant view in the literature that the CF past fills a gap left by the CF optative. I suggest that we should rather look at the role of the life cycles of counterfactuals, because new counterfactuals simply develop their counterfactuality in the past and then extend to the present and, when possible, the future. This better explains the overlap in past CF reference by both CF optative and CF indicative forms in Archaic Greek. Such a historical process of temporal reference extension must lie behind the genesis and development of the CF optative as well (see section 7 for hypotheses based on internal evidence and the typology of the life cycle). What can be observed from the CF optatives referring to the present and future in Archaic Greek is that they contain contextual cues to their counterfactual value. For example, one finds CF declaratives or wishes

in the preceding sentence serving as the counterfactual condition (as in examples 15 and 16) or a preceding condition with the optative that expresses an obvious counterfactuality (e.g. sheep being able to talk (*Od.* 9.459), someone not being dead (*Od.* 11.502) or something which already happened not having happened (*Il.* 11.387) etc.). In example (15), the counterfactuality of Halitherses having died far away blocks the realizability of him reading his signs now, which he just did. In example (16) the CF complaint by Agamemnon about his troops blocks the realizability of the downfall of Troy in the immediate future, as Agamemnon does not believe that such exceptional courage is found in all of his warriors. For this reason, he can then suggest that it is predetermined that a bowing by the city of Priam is CF. Thus, this example underlines the role of the speaker's conceptualization of reality in counterfactuality.

(15) *Present-referring CF indicative & optative*

αὐτὰρ Ὀδυσσεὺς
 ὤλετο τῆλ', ὥς καὶ σὺ καταφθίσθαι σὺν ἐκείνῳ
 ὄφελος· οὐκ ἂν τόσσα θεοπροπέων ἀγόρευες,
 οὐδέ κε Τηλέμαχον κεχολωμένον ὦδ' ἀνιείης,
 σὺ οἴκῳ δῶρον ποτιδέγμενος, αἶ κε πόρῃσιν.

'As for Odysseus, he has perished far away, as you also *should have perished* with him. Then you **would not have so much to say** in your reading of signs, **or be urging** Telemachus on in his anger, looking for a gift for your household, in hopes that he will provide it.' *Od.* 2.182–186

(16) *Future-referring CF optative*

αἶ γὰρ Ζεῦ τε πάτερ καὶ Ἀθηναίη καὶ Ἄπολλον
 τοῖος πᾶσιν θυμὸς ἐνὶ στήθεσσι γένοιτο·
 τῷ κε τάχ' ἠμύσειε πόλις Πριάμοιο ἄνακτος
 χερσὶν ὑφ' ἡμετέρησιν ἀλοῦσά τε περθομένη τε.

'Father Zeus and Athene and Apollo, *if only* such heart as yours *were found* in the breasts of all; **then would** the city of king Priam **immediately** bow its head, taken and sacked by our hands.' *Il.* 4.288–291

The diachrony of temporal reference discussed above and illustrated by the table also hides some important factors of change which need to be addressed. First of all, as also discussed for CF conditions, there are clear examples of contexts which mix CF optative with CF indicative forms. In example (15) the CF present is already expressed by the innovative indicative (ἀγόρευες). In fact, in example (15) present-referring counterfactuals are expressed in the same sentence by the archaic optative and the innovative indicative use, indicating that the CF indicative with ἂν could already refer to the *present* in Archaic Greek (pace Stahl 1907: 280–282;

Gerö 2001: 187). In example (14) the past conditional preceding the formulaic CF main clause with a CF optative has a CF indicative. Further evidence of historical competition in Archaic Greek can be found in the past CF Homeric formula “he would have died had not...” in which the main clause can contain an optative (e.g. *Il.* 5.311; 5.388) as well as an indicative (e.g. *Il.* 8.90; *Od.* 24.528). As discussed in section 3, such constructional competition illustrates the bridging contexts in which the CF optative is replaced by the CF indicative over time. The fact that the same formula is changed to fit more innovative mood usage supports the innovation. Furthermore, the combinations in a direct inferential CF (i.e. uses by the Homeric narrator inferring that it is true that a CF course of events could have happened) provide further evidence about the innovative character of the use with the CF indicative: such examples exist with optatives as well but are less frequent because they are more archaic (see the two instances *Il.* 22.20; *Od.* 2.62 versus 70 instances with the indicative). Also, the high frequency of CF past indicatives in declaratives highlights the fact that their evolution was already very much on its way. In fact, the use of aorists, imperfects and pluperfects in CF indicatives in Archaic Greek illustrates their wide usage domain.⁴⁰ Third, example (15) illustrates that atelic states of affairs (i.e. τόσσα ἀγόρευες ‘say so much’) lead the change in temporal reference to the present as we have found for de-activated illocutions as well, as also suggested by the other example of a present-referring CF indicative in a declarative illocution in Archaic Greek *Od.* 19.283 ἦην (which has manuscript variants in the form of the CF optative).⁴¹ Since the CF indicative in example (15) does not have manuscript variants in the form of the CF optative and also refers to the present already in Archaic Greek in an atelic state of affairs, the reading of the CF indicative is most likely correct.

Furthermore, we find a similar distribution of tense-aspect of CF indicatives with ἄν in Classical Greek declarative as in de-activated illocutions, which challenges earlier suggested distributions because the aorist can be used in the present (17%), the imperfect in the past (19%) and the pluperfect in the past (56%). On the one hand, certain aspects show a clear temporal preference due to their aspectual profile, e.g. aorist 83% past, imperfect 80% present and pluperfect 56%

⁴⁰ Cf. respectively *Il.* 4.421; 5.886; *Il.* 8.454.

⁴¹ Two other pieces of corpus evidence which space prevents me from discussing further are that (1) the majority of past CF indicatives in Archaic Greek declaratives are augmented (63% = 92 out of 146 versus 37% = 54 of 146) which suggests that these constructions were created when the augment was already stable to some degree in referring to the past, and (2) that they are marked by both κε and ἄν (134 vs 14), as the counterfactual optative is, which would suggest that both modal particles had already spread across different moods when the CF indicatives were created. However, there is more to these thorny topics than I can discuss here.

Table 8: Tense-aspect of CF indicatives with ἄν in Classical Greek declaratives

Tense-aspect	Temporal reference		
	Past	Present	Future
Past aorist	217 (83%)	45 (17%)	0
Past imperfect	82 (19%)	347 (80%)	2 (1%)
Past pluperfect	10 (56%)	8 (44%)	0

past. On the other hand, temporal reference extensions to the present have taken place for all three aspects regardless of their aspectual constraints. Moreover, as I believe was to be expected on the basis of the aspectual profile of the imperfect, the imperfect even received extensions into the future (see example 17 where Alcestis, who has agreed to die for Admetus, speculates about a CF future where she was alive). I added the implicit CF condition between square brackets in the translation.

(17) *Future-referring CF imperfect indicative*

μόνος γὰρ αὐτοῖς ἦσθα, κοῦτις ἐλπίς ἦν
σοῦ κατθανόντος ἄλλα φιτύσειν τέκνα.

κάγώ τ' ἄν ἔζων καὶ σὺ τὸν λοιπὸν χρόνον,

κούκ ἂν μονωθεῖς σῆς δάμαρτος ἔστενες
καὶ παῖδας ὠρφάνευες. ἀλλὰ ταῦτα μὲν
θεῶν τις ἐξέπραξεν ὥσθ' οὕτως ἔχειν.

‘For you were their only son, and there was no hope, with you dead, that they would have other children. [Had they agreed to die,] **you and I would live the remainder of our lives together**, and you would not be grieving at the loss of your wife or raising your children as orphans. But some god has brought these things to pass.’

E. *Alc.* 293–298

It may come as no surprise that the future reference example is in an atelic state of affairs, since the temporal reference of the atelic state of affairs quite literally extends into the CF future (see “live the remainder of our lives” (τὸν λοιπὸν χρόνον)). In fact, when we incorporate the parameter of actionality into the data, we again observe the strong interplay of actionality, aspect, diachrony and contextual cues. On the one hand, we observe strong tendencies such as atelic imperfects with present reference (94%), atelic imperfect futures (100%), telic aorist pasts (63%) and telic pluperfect pasts (80%). On the other hand, there are counterexamples to a direct relationship between aspect, actionality and temporal reference, as indicated by the frequency of atelic imperfect pasts (70%), telic aorist presents (47%) and telic perfect presents (68%). Thus, grammatical aspect is a stronger constraint on the diachronic extension of temporal reference, but atelic states

Table 9: Actuality of CF indicatives with ἄν in Classical Greek declaratives

	Tense-aspect		Temporal reference	
	Past	Present	Future	
aorist	telic	136 (63%)	21 (47%)	0
	atelic	81 (37%)	24 (53%)	0
imperfect	telic	25 (30%)	22 (6%)	0
	atelic	57 (70%)	325 (94%)	2 100%
pluperfect	telic	8 (80%)	5 (62%)	0
	atelic	2 (20%)	3 (38%)	0

of affairs can facilitate extensions (e.g. atelic presents and futures) or counter extensions (e.g. telic pasts). In fact, for both the present-referring imperfect and aorist, for which we have the most corpus data, atelic states of affairs represent the majority, which again suggests that atelic states of affairs to some extent receive extensions regardless of aspect. This situation is similar to what we observed for CF indicative conditionals. Also, contextual cues may help clarify the temporal reference, as in example (18) with *νυνὶ*.

(18) *Present-referring CF aorist indicative*

Ὡσπερ τοῖνυν ἐγὼ ταῦτα δεικνύω τὰ ψηφίσματα, οὕτω καὶ σὺ δεῖξον, Αἰσχίνη, ὁποῖον ἐγὼ γράψας ψήφισμα αἰτίός εἰμι τοῦ πολέμου. ἀλλ' οὐκ ἂν ἔχοις· εἰ γὰρ εἶχες, οὐδὲν ἂν αὐτοῦ πρότερον **νυνὶ παρέσχου**.

'As I cite these decrees, Aeschines, *you must cite* some decree by proposing which I became responsible for the war. *But you cannot cite one; if you could, there is no document which you would produce more readily just now.*'

D. 18.76.1–4

Finally, it should be re-emphasized that in Classical Greek the optative has lost its CF value at the expense of the CF indicative (*pace* De Decker 2015: 224f.). Examples that are sometimes mentioned (esp. from Herodotus) are in fact uses of the potential optative which lack a counterfactual value.⁴² There is nothing CF about this epistemic use of the potential optative,⁴³ as it indicates that Herodotus considers it a possibility (i.e. the suppressed condition *if it is as they say*) that the Greeks just mentioned – whose precise identity is unknown – could be Cretan. Thus, here as

⁴² Cf. also the discussion by Wakker (1994: 165) and the skeptical remarks as early as Gildersleeve 1900: 172–176.

⁴³ For the epistemic use of the potential optative, its distribution and its distinction from other mood strategies in Classical Greek, see la Roi 2019.

in other places (e.g. 7.180.6 with the epistemic adverb τάχα ‘perhaps’) the potential optative lacks its previous CF value.

(19) *Present-referring non-counterfactual optative*

οὕτω μὲν Ἴοῦν ἐς Αἴγυπτον ἀπικέσθαι λέγουσι Πέρσαι, οὐκ ὡς Ἕλληνες, καὶ τῶν ἀδικημάτων πρῶτον τοῦτο ἄρξαι· μετὰ δὲ ταῦτα Ἑλλήνων τινάς (οὐ γὰρ ἔχουσι τοῦνομα ἀπηγήσασθαι) φασὶ τῆς Φοινίκης ἐς Τύρον προσσχόντας ἀρπάσαι τοῦ βασιλέως τὴν θυγατέρα Εὐρώπην. **εἶψαν δ’ ἂν οὗτοι Κρήτες.** ‘In this way, the Persians say (unlike the Greeks), Io came to Egypt, and this, according to them, was the first wrong that was done. Next, according to their story, some Greeks (they cannot say who) landed at Tyre in Phoenicia and carried off the king’s daughter Europa. **These Greeks may be Cretans.**’

Hdt. 1.2.1–6

5 Counterfactual mood forms in interrogative illocutions

Assessing the distribution of CF optative (1 past-referring aorist *Il.* 19.90) and indicative forms (2 past-referring aorists, *Il.* 22.202 (a direct inferential) and *HH* 3.324) in Archaic Greek interrogatives, we can only conclude either that the replacement was not as far on its way as in declaratives or that we lack substantial corpus evidence. In fact, even in Classical Greek CF indicatives in interrogatives are not as frequent as in declaratives (see Table 10). What we can discern, however, is that temporal reference extension is again strongly bound by aspectual construal, because the majority of aorist and perfect CF indicatives in interrogatives are past whereas the imperfects are generally present.

Table 10: Tense-aspect of CF indicatives with ἄν in Classical Greek interrogatives

Tense-aspect	Temporal reference		
	Past	Present	Future
Past aorist	53 (91%)	5 (9%)	0
Past imperfect	13 (33%)	27 (67%)	0
Past pluperfect	3 (100%)	0	0

More importantly, the majority of CF interrogatives refer to the past (69 past vs. 32 present, 68% vs. 32%) and are not limited to the genre of rhetoric (cf. the ex-

amples below). There is, I argue, a functional explanation for this, because CF interrogatives are typically rhetorical questions which, instead of genuinely seeking information, seek to declare something and have the illocutionary force of declaratives. As such they question something which is known to be the case and therefore prototypically completed past state of affairs. In linguistic terms, such CF questions can be classified pragmatically as assertoric (Declerck & Reed 2001: 41, 60), e.g. *who would have thought/done X? = nobody would have thought/done X* (see la Roi submitted(c) for an application to Ancient Greek). They can be subdivided further into CF *wh*-questions, open questions and yes-no questions. In example (20) the chorus declares that Admetus cannot possibly have held the funeral of his good wife without mourners. Thus, the CF question reverses the positive polarity of the sentence to a negative one, in example (20): *it cannot be that Admetus has held the funeral of his good wife without mourners*.

(20) *Past-referring CF aorist indicative*

πῶς ἂν ἔρημον τάφον Ἄδμητος
κεδνής ἂν ἔπραξε γυναικός;

‘**How would Admetus have held** the funeral of his good wife without mourners?’ E. Alc. 96f.

Such CF questions are also followed by linguistic signals by the speaker that the question is to be interpreted as a declarative, e.g. emphatic statements (‘incredible’ (see ex 21), ‘this is not true’ (e.g. Dem. 21.115.5) or subjective tag questions (‘right?’, e.g. Pl. *Gorg.* 514a7). Another sign that such questions are typically used in an assertoric fashion is that they are found in a so-called indirect inferential use.⁴⁴ CF indirect inferentials use the obvious or supposed counterfactuality of the main clause to let the addressee infer the counterfactuality of the conditional clause.⁴⁵ Thus, the pragmatic strength transfers from the main clause (*q*) to the conditional clause (*p*), which differs from predictive or direct inferential usage. So in example 21 Simonides infers that it (i.e. the supposition in *p*) must not be so (i.e. not *p*),

⁴⁴ There is a wider variety of indirect inferential conditionals in Ancient Greek than has thus far been acknowledged in the literature. Wakker (1994: 231–235), for example, only discusses a set of “rhetorical” uses of propositional conditionals which would also classify as indirect inferential conditionals (e.g. *If you’re the Pope, I’m the Empress of China*, i.e. I’m not the Empress of China so you are not the Pope). Such conditionals are sometimes called *ad absurdum* conditionals (Declerck & Reed 2001: 296–300). See la Roi submitted(c) for an overview of the different types of conditionals in Ancient Greek.

⁴⁵ Please note that these CF usages should be distinguished from non-CF indirect inferential usages such as with πῶς/τί οὐ(κ) or which only provide a contradictory implicature: if X, Y = if X, then Y should be the case [but Y strangely is not the case]. For their differences, see la Roi submitted(b).

since everyone desires to trade places with a despot. In other words, we are dealing with a sort of *reductio ad absurdum*, since the logical consequence cannot be true.

(21) *Present-referring CF imperfect indicative*

ἄπιστα λέγεις, ἔφη ὁ Σιμωνίδης, εἰ γὰρ οὕτως ταῦτ' εἶχε, πῶς ἂν πολλοὶ μὲν ἐπεθύμουν τυραννεῖν, καὶ ταῦτα τῶν δοκούντων ἰκανωτάτων ἀνδρῶν εἶναι; πῶς δὲ πάντες ἐζήλουν ἂν τοὺς τυράννους;

“Incredible!” exclaimed Simonides. “*Were it so, how should* a despot’s throne **be an object of desire** to many, even of those who are reputed to be men of ample means? And how should all the world envy despots?”

X. *Hier.* 1.9.1–5

The distribution of these CF questions across authors also points at a rhetorical use, since half of the questions are found in argumentative texts such as Platonic philosophical argumentation (35 out of 101 = 35%) and Classical Greek rhetoric (51 out of 101 = 50%), in the latter especially when refuting what the opponent has said (e.g. *if that was the case, then X would have happened* = X did not happen so your argument/opinion is false). In authors such as Aristophanes and Euripides they occur when speakers on stage make a longer argument (e.g. E. *IT* 1012 or Ar. *Ach* 542). Only very infrequently do we find in Platonic texts examples which do not seem to be strictly rhetorical but inquire about a CF scenario under discussion, e.g. Pl. *R.* 372d5 or *Lg.* 658b3.

Furthermore, as for declaratives, telicity is a guiding factor for temporal reference but not as strong of a constraint as grammatical aspect. For example, of past-referring CF aorists, 53% (28) are telic and 47% (25) atelic. Thus, it seems that how interrogative illocutions are most often used (i.e. rhetorical questions questioning known events) is the stronger constraint on temporal reference extension, as is also illustrated by the frequency of atelic imperfects which still refer to the past, as in example (22).

(22) *Past-referring CF imperfect indicative*

σημεῖον ὑμῖν ἐρώ: πρὸ γὰρ τοῦ διακόπτειν ἐπιχειρήσαι τὴν ναῦν, τίθενται πρὸς τίνα τῶν συμπλεόντων οὗτος καὶ ὁ Ἡγέστρατος συγγραφὴν. καίτοι εἰ μὲν εἰς πίστιν ἔδωκας, **τί πρὸ τοῦ κακουργήματος ἂν τὰ βέβαι' ἐποιού;**

‘I will give you a proof. For before the attempt was made to cut through the ship’s bottom, this man and Hegestratus deposited with one of the ship’s company a written agreement. Yet, if you had confidence in him when you gave the money, **why should you have sought some security** for yourself *before the crime?*’

Dem. 32.16.3–6

Still, for present-referring CF imperfects atelic states of affairs help distinguish the present reference, as 26 are atelic (96%) and only 1 telic (4%).

6 Counterfactual mood forms in wishes from Archaic to Classical Greek

Before discussing the distribution of CF mood forms in wishes, we need to disentangle the various linguistic strategies. Both in Archaic and Classical Greek, we find the following types of CF wish strategies, constructions which each have a different diachronic origin but, as I will illustrate, have been influenced by each other diachronically through analogy.

Archaic Greek

1. Wish optative mood	14
2. Insubordinate wishes	65 in total
1. αἴθε, αἶ γάρ, εἰ γάρ, εἴθε, εἰ with optative	41
2. αἴθε, ὡς with ὄφελ(λ)οῦ + inf.	24
3. ὄφελ(λ)οῦ + inf. on its own as wish	6

Classical Greek

1. Insubordinate wishes	39 in total
1. εἴθε, εἰ γάρ with ὄφελ(λ)οῦ	12
2. εἴθε, εἰ γάρ with past indicatives	27
2. ὄφελ(λ)οῦ on its own as wish	30

According to la Roi (2021), the major reasons that we need to distinguish these types are that (1) the insubordinate wishes and wishes with optative mood only, which have until recently been treated as the same construction,⁴⁶ have a different diachronic origin, (2) the constructions have undergone different diachronic developments (e.g. grammaticalization versus insubordination, i.e. the diachronic conventionalization of formally subordinate clauses as main clauses, see la Roi 2021: 11–22),⁴⁷ and (3) there are distinct differences in how conventionalized certain insubordinate wish structures are (e.g. la Roi 2021: 14–16 *pace* Wakker 1994: 395f.). Because these wish strategies were treated as the same thing, a relative chronology of these constructions has not been suggested yet.⁴⁸ Therefore, I trace the

⁴⁶ E.g. Chantraine 1953: 214; Allan 2013; Revuelta Puigdollers 2017: 167. As discussed by la Roi (2020b: 231), this approach has a long history going back all the way to at least Apollonius Dyscolus. See la Roi 2021: 11–27 for a re-evaluation of these wish expressions.

⁴⁷ I also summarized earlier insubordination-like approaches, such as by Wakker (1994) and others, and the differences vis-à-vis my account.

⁴⁸ See Andersen & Haug 2012 for further references on matters of relative chronology in Archaic Greek.

diachronic development of these CF wish strategies separately and pay attention to aspects of relative chronology (e.g. analogical extension in CF mood form and diachronic contamination of constructions). To that end, I first detail the development of CF wish strategies in Archaic Greek and subsequently in Classical Greek.

In Archaic Greek, the most archaic CF wish strategy is the use of the wish optative mood by itself, as it is an inherited feature of PIE. From the perspective of the life cycle of CF mood forms from past to present and future reference, I would argue that this strategy displays a high degree of conventionalization, because it has a distinct preference for present counterfactuals regardless of aspect (see Table 11 and example 23). Also it has a low overall frequency (14 occurrences) in comparison with the more innovative insubordinate strategy with the optative (41 occurrences). Also, contrary to what one finds in standard grammars, Archaic Greek had various wish strategies which were used to make past-referring CF past wishes (see also below).⁴⁹

Table 11: Aspect and temporal reference of the Archaic Greek CF optative

Optative mood form	Temporal reference		
	Past	Present	Future
Imperfect	0	8	0
Aorist	1	4	0
Perfect	0	1	0

In this example Antinous reproaches Irus and wishes that he does not exist now (cf. *vũn*) or was ever born, because he trembles before the old beggar Odysseus.

(23) *Present- & past-referring CF optative*

Ἀντίνοος δ' ἐνένιπεν ἔπος τ' ἔφατ' ἕκ τ' ὀνόμαζε·

“*vũn* μὲν **μήτ' εἴης**, βουγάϊε, **μήτε γένοιο**,

εἰ δὴ τοῦτόν γε τρομέεις καὶ δεΐδιας αἰνῶς,

ἄνδρα γέροντα δύη ἀρημένον, ἧ μιν ἰκάνει.

‘Then Antinous upbraided him and spoke, and addressed him: Braggart, **I wish** you **did not exist now, nor had ever been born**, if you tremble before this fellow and fear him so terribly—an old man, overcome by the woe that has come upon him.’

Od. 18.78–81

⁴⁹ Pace Goodwin (1889: 294), who suggests that the wishes with ὄφελ(λ)ον are the only available past wish expressions in Homer.

Finally, it should be noted that the independent wish optative is considerably more frequent in its non-CF usage, occurring 147 times in Archaic Greek. In those cases it refers to a realizable wish for the realization of a state of affairs in the future, or more rarely, the present. Of these 147 wish optatives in my corpus, 102 are in the aorist, 43 in the imperfect and 2 in the perfect. They prototypically refer to the future (about 88%), but can in some cases also refer to the present when used in the imperfect (9%) or aorist (14%). In the latter cases, in the imperfect they concern stative states of affairs and the present reference is often signalled by the temporal adverb *vūn* (e.g. *Il.* 14.107, *Od.* 14.193). By contrast, present-referring non-CF wish optatives in the aorist do not have this actionality limitation to statives, but their present reference can be derived from a combination of temporal adverbs such as *vūn* (*Od.* 4.685) and their pragmatic use as a polite indirect order for something that the speaker would like to see realized now (*Od.* 4.735 ἀλλά τις (...) καλέσειε “please someone call [now]”), or both factors combined (*Od.* 4.193 καὶ *vūn*, εἴ τί που ἔστι, πίθοιό μοι “please grant my request now, if it is at all possible.” Finally, non-CF insubordinate wishes with the wish optative are also more frequently used in a non-CF way (52 times vs. 41 CF uses and with all the different insubordinate markers αἶθε, αἶ γάρ, εἶ γάρ, εἴθε, εἶ), but are still less frequent than independent wish optatives.⁵⁰

In contrast to the inherited CF wish optative, the insubordinate wish strategy, as observed by la Roi (2021: 11–22), is the result of a more recent historical process of insubordination. According to la Roi, what for a long time have been called wish particles (i.e. αἶθε, αἶ γάρ, εἶ γάρ, εἴθε, εἶ) have their origin in conditionals. In other words, conditional subordinate clauses have changed into main-clause wish structure. The three most important reasons given by la Roi for that analysis are that (1) those ‘wish particles’ trace back to conditional subordinators and some of these ‘wish particles’ are even still used as conditionals in Archaic Greek (εἶ γάρ and εἶ), which reveal differences in how conventionalized their insubordinate use was, (2) the insubordinate usages share main-clause features with main-clause wishes with the optative (e.g. vocatives, distinctive syntactic complexity, independent illocutionary force), and (3) the corpus evidence for insubordinate wishes shows signs of further conventionalization (e.g. functional limitation of εἴθε, αἶθε and αἶ γάρ to wishes only; analogical extension from optative to indicative mood forms to unambiguously introduce CF wishes; formulaic usage with ellipsis of infinitive).⁵¹

⁵⁰ Thus, in Archaic Greek wishes are *not* most often insubordinate wishes, just as in Classical Greek (see la Roi 2020b: 229 and below, *pace* Schwyzler & Debrunner 1950: 321; van Emde Boas et al. 2019: 442).

⁵¹ Naturally, la Roi 2021 provides a fuller account than I am able to provide here and references to insubordination-like analyses from previous secondary literature on Ancient Greek.

I would like to suggest that the temporal reference of insubordinate wishes also provides evidence for the suggestion that the insubordinate wishes are the result of a more recent diachronic process, the results of which we can observe in Archaic Greek.⁵² As can be seen in the table, the insubordinate wishes with the optative which have been around for longer have extended their reference into the present, both with the aorist and the imperfect (see the past and present insubordinate wishes in example 24).⁵³ By contrast, the more recent innovations of those same insubordinate wishes with the past indicative of ὤφελ(λ)ον (in the aorist or imperfect) still have a stronger preference for the past (see example 25 and Table 12), because they are more recent creations.

Table 12: Temporal reference of innovative CF wish strategies in Archaic Greek

Innovative wish strategies in Archaic Greek	Temporal reference		
	Past	Present	Future
αἶθε, αἶ γάρ, εἰ γάρ, εἶθε, εἰ with aorist optative	1 (11%)	8 (89%)	0
αἶθε, αἶ γάρ, εἰ γάρ, εἶθε, εἰ with imperfect optative	0	32 (100%)	0
αἶθε, ὡς with aorist ὤφελ(λ)ον	15 (83%)	3 (17%)	0
αἶθε, ὡς with imperfect ὤφελ(λ)ον	5 (83%)	1 (17%)	0
Aorist wish ὤφελ(λ)ον	2 (67%)	1 (33%)	0
Imperfect wish ὤφελ(λ)ον	2 (67%)	1 (33%)	0

(24) *Present- and past-referring CF insubordinate optative*

Αἶαν ἄμαρτοεπὲς βουγάϊε ποῖον ἔειπες·

εἰ γάρ ἐγὼν οὔτω γε Διὸς πάϊς αἰγιόχοιο

εἶην ἦματα πάντα, **τέκοι** δέ με πότνια Ἥρη,

τιοίμην δ' ὡς τίετ' Ἀθηναίη καὶ Ἀπόλλων,

ὡς νῦν ἡμέρη ἦδε κακὸν φέρει Ἀργείοισι

‘Aias, witless in speech, you braggart, what a thing you have said! For my part **I wish that I were** all my days as surely the son of Zeus who bears the aegis, and the queenly Hera **had conceived me**, and that I might be honored like Athene and Apollo, as now this day surely brings evil on the Argives’

*Il.*13.824–828

⁵² Not to make matters more complex than they already are, I leave out the CF insubordinate wishes with the infinitive. See la Roi 2021: 20–21 for a discussion of these constructions.

⁵³ Note that Hector is being presumptuous here about what will happen, as rightly noted by Janko (1994: 146).

(25) *Past-referring CF insubordinate aorist* ὤφελ(λ)ον

αἴθ' ὄφελεις ἄγονός τ' ἔμειναι ἄγαμός τ' ἀπολέσθαι.

'I wish that you had never been born and **had died** unwed.' II.3.40

The innovation of insubordinate wishes with the optative being replaced by indicative ὤφελ(λ)ον requires further discussion, since previous research has treated ὤφελ(λ)ον on its own and ὤφελ(λ)ον in insubordinate wishes as the same thing (e.g. Chantraine 1953: 214, Allan 2013, Revuelta Puigdollers 2017: 167). As discussed above, these are different construction types, but they are related diachronically: the insubordinate construction with ὤφελ(λ)ον provided Archaic Greek with the means to unambiguously produce a CF wish. For the analogical extension of insubordinate wishes to using ὤφελ(λ)ον, there must have already been some type of bleaching of the original meaning of ὀφείλω 'to owe' (cf. Goodwin 1889: 294). I return to this matter after discussing the Archaic Greek evidence for ὀφείλω as presented by Allan (2013: 11–30). He constructed the following branching evolutionary path for the development of wish strategies with ὤφελ(λ)ον (i.e. disregarding the difference in construction between insubordinate ὤφελ(λ)ον and non-insubordinate ὤφελ(λ)ον):

- (1) lexical *owe*
 - (2a) deontic *must*, which evolves both into
 - ★ (2b) epistemic *must*
 - ★ (3) *should (have)* CF assertion,
 - which evolved into (4) CF wish.

With regards to the available evidence, he suggests that we only have evidence for the deontic and epistemic stages (i.e. stages 2a and 2b) from Classical Greek, even though in Archaic Greek we already find CF assertions and wishes of ὤφελ(λ)ον (independent & insubordinate). He also paid special attention to the role of aspect in explaining the distribution of the imperfect and aorist forms of CF ὤφελ(λ)ον, suggesting that their distribution (i.e. in insubordinate wishes, independent wishes and assertions) should be explained semantically because he suggests that there is a semantic distinction in realizability between the two. Defining counterfactuality in a different way, as pertaining to “unrealized (non-factual) states of affairs” (Allan 2013: 23), he suggests that the occurrence of the CF imperfect or aorist form of ὤφελ(λ)ον is determined by a distinction of realizability: the imperfect ὤφελλον indicates that the desired event is unrealized at the moment of speech but still realizable in the future, whereas the aorist ὤφελον indicates that the event expressed by the infinitive is not realizable anymore at the moment of speaking

“because the momentum which would have led to the realization of the event, is lost” (Allan 2013: 23).⁵⁴

Although I agree in broad lines with the diachronic trajectory proposed by Allan, I would like to offer some revisions based on the available corpus evidence as well as the life cycle of CF temporal reference. Most importantly, his distinction between realizable and realized runs into trouble because it does not accurately classify constructions in terms of their counterfactuality. As discussed above, CF constructions present an *unrealizable* state of affairs which according to the speaker may be unrealized but need not be, e.g. *I wish she were coming round* = the point is that the speaker supposes that it unfortunately cannot be realized, not that it is not realized, or *if he had come tomorrow instead of today, he would have found me at home* = this cannot be realized in the *future*. To illustrate the relevance of making this distinction based on realizability, Allan classified the following example as “unrealized but realizable” (Allan 2013: 22), that is, CF in his terminology. However, I would say that the point of the speaker is that it was unrealizable in the past, since it presents the (expected) past gift of honor (see the aorist infinitive) as unrealizable in the past (see also the use of past tenses by Achilles to refer to what has happened before the speech moment). From the perspective of the changing temporal reference of counterfactuals, this therefore is an example where the CF reference has not extended to the present yet.

(26) *Past-referring CF assertion*

πολλὰ δὲ μητρὶ φίλῃ ἠρήσατο χεῖρας ὀρεγνύς·
 μήτηρ ἐπεὶ μ' ἔτεκές γε μινυνθάδιόν περ ἔόντα,
 τιμὴν πέρ μοι **ὄφελλεν** Ὀλύμπιος **ἐγγυαλίζει**
 Ζεὺς ὑψιβρεμέτης· νῦν δ' οὐδέ με τυτθὸν ἔτισεν·
 ἧ γὰρ μ' Ἄτρεΐδης εὐρὺν κρείων Ἀγαμέμνων
 ἠτίμησεν· ἐλὼν γὰρ ἔχει γέρας αὐτὸς ἀπούρας.

‘Mother, since you bore me, though to so brief a span of life, **honor surely ought the Olympian to have given into my hands**, Zeus who thunders on high; but now he has honored me not at all. In fact the son of Atreus, wide-ruling Agamemnon, has done me dishonor; for he has taken away and holds my prize through his own arrogant act’ *Il.* 1.351–356

By contrast, example *Il.* 19.200 ἄλλοτέ περ καὶ μᾶλλον ὀφέλλετε ταῦτα πένεσθαι ‘you should busy yourself rather at some other time about these things’ is not

⁵⁴ Note that Wakker entertained a similar explanation of the aorist aspect in CF declaratives with ἄν: “the decision about the non-realization of a state of affairs in the past was already taken at some earlier moment” (Wakker 1994: 146).

CF (i.e. unrealizable in the present according to the speaker, *pace* Allan 2013: 22, as in fact alluded to by Allan (2013: 24)), but a non-CF deontic usage which allegedly was absent from Archaic Greek but does not seem to be after all. Finally, he treats more examples as CF assertion than the corpus evidence gives grounds to. Although he correctly classifies *Il.* 1.353, 9.698, 10.117, 18.367, 19.200, 23.546 and *Od.* 4.472 as CF assertions, *Il.* 19.200 is a non-CF assertion (as mentioned above), *Il.* 18.367 is an *interrogative* (πῶς δὲ ἔγωγ' (...) οὐκ ὄφελον Τρώεσσι κοτεσσαμένη κακὰ ῥάψαι; 'how ought I not in my resentment against the Trojans have stitched evils for them?'), and *Il.* 9.698 is already a CF wish (*pace* Allan 2013: 16f.), as evidenced by the presence of μή that signals the illocutionary change to wish (μὴ ὄφελος λίσσασθαι ἀμύμονα Πηλεΐωνα μυρία δῶρα διδούς 'I wish you had *not* begged the incomparable son of Peleus, nor offered countless gifts'.⁵⁵

Now, there is in my view also evidence for epistemic ὄφελ(λ)ον in Archaic Greek in addition to the evidence for deontic ὄφελ(λ)ον discussed above. As recently suggested by la Roi (2020b: 219) and by general linguistic literature,⁵⁶ wishes are epistemic in nature, as they express an attitude towards a certain realizable or unrealizable proposition to have been or be the case. In contrast to an evaluation of the (moral) necessity of realizing such a state of affairs (i.e. deontic modality), wishes presuppose that the state of affairs is unrealizable (CF) or realizable and a speaker can signal his/her personal stance with regards to how certain he/she is that the state of affairs in question was or will be the case in the present or future (e.g. with subjective particles, la Roi 2020b). As a result, the modals allowed in wishes need to be epistemic (not deontic), which is what can be observed cross-linguistically for in subordinate wishes as well. Thus in subordinate wishes of the types (*o*) *that/if only he would/could (have) X* in the Germanic languages use epistemic modal verbs (D'Hertefelt 2018: 34f.): English epistemic *would/could*, German *können* 'can, be able to', Swedish *fa*, Danish *ma* 'may'. Thus, if we want to give a more literal gloss of the following example which takes into account the in subordinate nature of the ὡς ὄφελος construction as well as the epistemic nature of the modal auxiliary, we should translate with a past epistemic modal in English:⁵⁷ '(o) *would* that you had died there!' Helen does not say that there was some moral necessity that Paris had died in the past, but wishes that *this were true in the past*.

⁵⁵ The use of μή ὄφελλε as a wish in relative clauses such as *Il.* 17.686 mirrors the use of wish optative for wishes in relative clauses (cf. la Roi 2020b: 225f.).

⁵⁶ See especially Palmer 2001: 134f. "it could be argued that fears and wishes are best treated as epistemic, since they indicate attitudes to propositions rather than unrealized events" and Nikolaeva 2016: 78.

⁵⁷ See Ward et al. 2003 for the different usages of epistemic would in contemporary English.

(27) *Past-referring CF aorist ὄφελ(λ)ον in independent wish*

ἦλυθες ἐκ πολέμου· ὡς ὄφελεις αὐτόθ' ὀλέσθαι

ἀνδρὶ δαμείς κρατερῶ, ὃς ἐμὸς πρότερος πόσις ἦεν.

'You have come back from the war; **I wish you had died there**, vanquished by a mighty man who was my former husband.'

Il. 3.428f.

Therefore, the semantic bleaching of the originally deontic ὄφελ(λ)ον (e.g. in declaratives *he should have X*) must have taken place before the analogical adoption of ὄφελ(λ)ον into in subordinate wishes (*I wish X would (have) been the case*). The presence of independent wish ὄφελ(λ)ον with the negation belonging to wishes would support this: *μη ὄφελεις λίσσεσθαι ἀμύμονα Πηλεΐωνα μυρία δῶρα διδούς* 'I wish you had *not* begged the incomparable son of Peleus, nor offered countless gifts'.

Next we should assess the Classical Greek distribution of temporal reference and tense-aspect⁵⁸ with ὄφελ(λ)ον in its epistemic use in in subordinate wish constructions and its independent use as wish. Rather than directly correlating only the aorist with unrealizability as Allan does, I suggest that the distribution that we find in Classical Greek (see Table 13) is the result of diachrony as well, not only because both the imperfect⁵⁹ and aorist forms of ὄφελ(λ)ον⁶⁰ can refer to the present but relative to the situation in Archaic Greek they refer to the present more. In fact, what the table illustrates is that the more archaic in subordinate wishes (with aorist ὄφελ(λ)ον) have extended to the present more than the other more innovative wish usages. This difference in the rate of temporal extension follows the predicted trajectory of the life cycle of counterfactuals. Moreover, overall we find more CF aorists of ὄφελ(λ)ον referring to the present, but in percentages these aspects are distributed the same way across temporal reference in Archaic Greek. By contrast, the innovative in subordinate wishes of εἰ γάρ, εἴθε with aorist indicative still predominantly refer to the past (85%).

Example (28) of aorist ὄφελ(λ)ον in an in subordinate wish illustrates the extension to the present, as does its formulaic use of Εἰ γάρ ὄφελον on its own for a *present-referring* CF wish in Classical Greek (see Pl. *R.* 432c3). Note that the other examples of aorist ὄφελ(λ)ον with an infinitive in an in subordinate wish have an

⁵⁸ Allan (2013: 27–29) provides corpus evidence that the aspect of the infinitive is determined by the actionality of the verb.

⁵⁹ Thus, while the aorist form of ὄφελ(λ)ον is more frequent in Classical Greek, the CF imperfect form is still used in Classical Greek (contra Allan 2013: 29).

⁶⁰ Note that I limit myself to these aspects, since Revuelta Puigdollers (2017: 162) has already provided an overview for the other verb forms.

Table 13: CF wish strategies and temporal reference in Classical Greek

CF wish strategies in Classical Greek	Temporal reference		
	Past	Present	Future
εἰ γάρ, εἴθε, ὥς with aorist ὤφελ(λ)ον	11 (69%)	5 (31%)	0
αἴθε, ὥς with imperfect ὤφελ(λ)ον	0	0	0
aorist ὤφελ(λ)ον as independent wish	25 (93%)	2 (7%)	0
imperfect ὤφελ(λ)ον as independent wish	1	2	0
εἰ γάρ, εἴθε with aorist indicative	11 (85%)	2 (15%)	0
εἰ γάρ, εἴθε with imperfect indicative	0	12	0

atelic present infinitive (cf. Ar. *Pax* 1068; *V* 731 both εἶναι ‘be’) as in example 31, showcasing again that atelicity facilitates extensions from the past to the present.

(28) *Present-referring CF insubordinate aorist ὤφελ(λ)ον*

Εἰ γάρ ὠφέλον, ᾧ Κριτῶν, **οἷοί τ’ εἶναι** οἱ πολλοὶ τὰ μέγιστα κακὰ ἐργάζεσθαι, ἵνα οἷοί τ’ ἦσαν καὶ ἀγαθὰ τὰ μέγιστα, καὶ καλῶς ἂν εἶχεν. νῦν δὲ οὐδέτερα οἷοί τε·

‘I only wish, Crito, the people were able to accomplish the greatest evils, that they might be able to accomplish also the greatest good things. Then all would be well. But now they can do neither of the two’ Pl. *Cri.* 44d6–9

In Classical Greek, the insubordinate CF wishes with the indicative have superseded the CF uses of insubordinate wishes with the optative.⁶¹ The former group have also been extended by analogy to other secondary past indicatives in the aorist or imperfect (although not with ὥς).⁶² With regards to temporal reference, we can observe more instances of present-reference by αἴθε, ὥς with aorist ὤφελ(λ)ον,

⁶¹ Illustrative is the use of an insubordinate wish with the optative by the old Iolaus (E. *Heracl.* 740) who before he enters the battlefield expresses the wish to his arm for it to be his ally as it had been in the past: εἴθ’, ᾧ βραχίων, οἷον ἠβήσαντά σε μεμνήμεθ’ ἡμεῖς, ἠνίκα ξὺν Ἡρακλεῖ Σπάρτην ἐπόρθεις, σύμμαχος γένοιό μοι τοιοῦτος. Iolaus has full belief in himself, but his helper has already suggested that his body is not as strong as his mouth is big (with a CF insubordinate wish, E. *Heracl.* 731). Quite surprisingly, Iolaus and his arm do in fact undergo a wondrous resurrection on the battlefield. Thus, what we observe is a matter of perspective, since Iolaus presents something as realizable. Cf. Chantraine 1953: 219: “l’optatif peut être utilisé pour un procès qui ne semble pas réalisable, mais que l’on peut imaginer un instant comme tel.” See la Roi 2020b for discussion of further examples from Classical Greek.

⁶² The explanation for the lack of extension with insubordinate ὥς is most probably that ὥς was becoming less frequent in Classical Greek already, as suggested by la Roi (2021). That would also explain why ὥς is only found with perfective ὤφελ(λ)ον and then only refers to the past (e.g. Ar. *Ran.* 954), although it is also used once with an ellipse of the infinitive (E. *IT.* 518).

independent wish ὄφελ(λ)ον, and even already by εἰ γάρ, εἴθε with aorist and imperfect past indicatives. What is revealing of the role of aspectual constraints on evolution, however, is that the extensions by aorists to the present is insignificant in comparison to the extension to the present by εἰ γάρ, εἴθε with imperfect indicative (see example 29).

(29) *Present-referring CF in subordinate imperfect indicative*

εἴθ' ἦσθα δυνατὸς δρᾶν ὅσον πρόθυμος εἶ.

'If only you were able to do all you long to do!'

E. Heracl. 731

To sum up, as with counterfactuals in other illocutions, CF wish illocutions take part in the life cycle of counterfactuals which extend their reference from past CF wishes to present CF wishes. At the same time, we have seen that these extensions are constrained by matters of aspectual construal (e.g. the aorist) as well as competing diachronic changes (e.g. analogical extensions and constructional replacements). This meant, for example, that the more innovative constructions (e.g. subordinate wishes with any past indicative) received temporal extensions to the present later than its older competitors, as the trajectory of the life cycle would predict. In Post-Classical Greek these CF wishes undergo even more changes, but that lies outside the scope of this paper.⁶³

7 Concluding remarks

In these concluding remarks, I summarize the most important findings of this paper both for the domain of counterfactuals as well as for diachronically related constructions such as the optative mood and modal auxiliaries.

An extensive diachronic corpus study has enabled us to challenge existing generalizations about CF mood forms from our standard grammars and secondary literature that are based on limited samples. In general, it was demonstrated that both for the CF optative and indicative, the temporal reference range was broader (i.e. from past to present to future) as well as more diverse per construction than previously assumed. The wide temporal reference range of the CF optative in Archaic Greek to past, present and future was used as evidence that it has also undergone the cross-linguistically frequent life cycle of counterfactuals (that started with past reference) but that it was already in its last stages. The life cycle of the CF indicative is interlinked with the CF optative because it replaces the CF optative

⁶³ See la Roi 2021 for the most recent summary of the different changes.

over time, starting with past counterfactuality but already in Archaic Greek moving to present-referring counterfactuality in declarative illocutions. The proposed trajectories of the CF optative and indicative forms also shed light on the trajectory which the optative may have undergone from PIE to Ancient Greek. Rather than seeing the past-referring CF optative as an innovation of Ancient Greek (Hettrich 1998: 266), I suggested that the past-referring CF optative is an archaic relic which Archaic Greek has inherited and is filtering out of the system. The low frequency of such past-referring CF optatives and CF optatives more generally in comparison to non-CF optatives in Archaic Greek, and the fact that the CF indicative has already replaced them in key contexts corroborates the inherited archaic nature of the CF optative. We can therefore maintain the *communis opinio* that both the CF and non-CF function of the optative is inherited. However, more speculatively, we could go one step further and try to deduce whether the CF optative perhaps existed before the non-CF optative. Since, on the one hand, counterfactual mood forms in their life cycle extend from past to non-past and can then lose their counterfactuality while retaining non-past temporal reference, and, on the other hand, both non-CF optatives and the CF indicative replacements are far more frequent than the CF optative in Archaic Greek, we might want to suggest that the non-CF non-past functions of the optative are also a result of the later stage in the life cycle of the CF optative. In other words, the non-CF functions of the optative will have become more frequent in Archaic Greek as a result of the loss of counterfactuality of the CF optative. Some very tentative evidence for this reconstructed trajectory is the following: (i) the original counterfactual value of the optative might be indicated by the secondary endings on the optative (i.e. mood and past combining for counterfactuality, cf. Allan 2013: 41, critical notes by Willmott (2007: 114f.), and Pitts 2019), (ii) the high degree of grammaticalization of the non-CF optative usage in Archaic Greek is evidenced by its widespread use in subordinate clauses (see Allan 2013: 36–42 for the prehistory of these subordinate clause usages), and (iii) parallels from Ancient Greek where a counterfactual mood form loses its counterfactual value at the end of its cycle, see the non-CF usages of ὄψεσθαι(λ)οι in Post-Classical Greek (Revuelta Puigdollers 2017: 182f.). Moreover, the usage of other moods in Indo-European languages for counterfactuality (e.g. the ‘conditional’ or indicative mood, Hettrich 1998: 264) could be indirect evidence for the type of replacements of the CF optative which we can trace in the Archaic Greek evidence. Of course, this scenario remains speculative and would require extensive *functional* cross-linguistic comparison of IE languages while taking into account differences in temporal distance in attestation. Finally, we should be extremely careful not to project the trajectory from Ancient Greek onto other languages as there is already evidence that the CF optative underwent different changes in Vedic compared to Ancient Greek (see la Roi 2021: 11).

In Classical Greek the life cycle of the CF indicative continues and temporal reference is extended to the present more, for all aspects and in telic states of affairs. Most importantly, the temporal reference extensions of the life cycle are shown to be diachronically constrained by aspectual semantics, since imperfect construal enables extensions to the present more easily than aorist and pluperfect, even though the latter also received extensions diachronically. As evidenced by the corpus examples and their temporal reference distribution, actionality of the state of affairs in its clausal context acts as a further, albeit less strong, constraint on temporal reference extension, since atelic states of affairs further enable temporal reference extensions. Similarly, contextual cues (e.g. temporal adverbials) and contextual knowledge (e.g. is the temporal location of the event in the common ground) provide synchronic constraints on the extension of temporal reference, causing, for example, less expected combinations such as an imperfect atelic past state of affairs referring to the past. Furthermore, by analyzing the temporal reference extensions *per illocutionary usage* (i.e. de-activated, declarative, interrogative and wish) it has been pointed out that the temporal reference extensions take place at different rates, for example due to other contemporary changes (e.g. insubordination and analogical contamination in wishes) or due to the effect of usage (e.g. CF indicatives in interrogatives being used for the past because they typically express rhetorical questions). Finally, the review of the corpus evidence revealed intimate connections of CF mood forms with other diachronically related constructions (e.g. non-counterfactual mood usage)⁶⁴ and linguistic aspects of relative chronology. For example, there are other counterfactuals structures which were the result of other processes of change (e.g. the CF use of the modal auxiliary μέλλω in various temporal references including the future, example 9), which require analysis in a future paper.

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⁶⁴ See also la Roi forthcoming who shows that the past habitual with the modal particle developed from the past counterfactual (not the past potential) through an invited inference of epistemic certainty (i.e. what would certainly have happened in the past must have happened regularly).

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