The life cycles of counterfactuals from Latin to Romance:

moods, modal verbs and their diachronies

Abstract

Moods and modals play a crucial role in the synchronic and diachronic expression of counterfactuals. In this paper, I provide an overview of the evidence for the life cycles of counterfactual moods and modals from the history of Latin into three Romance languages (viz. Spanish, Italian and French). In particular, I detail how the counterfactual 'subjunctive' was inherited into Archaic Latin, developed from Archaic to Post-Classical Latin, and how it was slowly replaced at different speeds in Latin and the Romance languages by different past indicatives and conditional moods. I also provide corpus evidence for the life cycles of counterfactual modal verbs from Archaic to Classical Latin and illustrate the ways in which modal verbs continued to play a role in the counterfactual system of Romance languages.

Keywords: counterfactuality, modality, diachrony, Latin, Romance languages, subjunctive

1 Counterfactual constructions and their life cycles from Latin to Romance

Counterfactual constructions are used by speakers to entertain possibilities that could not be realized in the past or the non-past (Dahl 1997, 97, Iatridou 2000, 231, Van linden and Verstraete 2008, 1865), such as past counterfactual *You should have called yesterday; If he had called, she would have known*; and non-past counterfactual *If only he knew what was going on*; *I wish I were rich*; *if he were rich, he would not drive around in such a cheap car.*[1] As illustrated by the examples listed, counterfactual constructions occur in different syntactic contexts (e.g. conditional protases, apodoses or simple main clauses), have different pragmatic functions (e.g. statement, wish) and typically consist of multiple elements with a counterfactual function in context (e.g. the deontic modal verb 'should' together with 'have called', 'if only' together with the past tense 'knew', 'I wish' together with the subjunctive 'were', or the combination of multiple past and modal elements in the protasis and apodosis). Most research on counterfactual constructions has focused on counterfactual conditionals, especially from a synchronic linguistic perspective. As a result, we have thus far obtained many relevant insights into the meaning and marking of counterfactuality in specific languages as well cross-linguistically, for example in the cross-linguistically common occurrence of the past tense (e.g. Steele 1975; James 1982; von Prince 2019), or the imperfective (e.g. Fleischman 1995; Iatridou 2000); a view that has gained the largest following recently is that counterfactual meanings are typically created by a combination of different temporal-aspectual and modal elements (cf. 'should have called', e.g. Van linden and Verstraete 2008). Typologists have also paid particular attention to cross-linguistic marking (a)symmetries found in the protasis and apodosis of counterfactual conditionals (see Haiman and Kuteva 2002; Olguin Martínez and Lester 2022).

Far fewer have investigated the *diachrony* of counterfactual constructions, especially beyond the usual suspect of counterfactual conditionals. This is striking because it is well known that counterfactual constructions can occur outside conditional environments, for example in wishes (e.g. *I wish you were here*) or using modal verbs, such as deontic *should* or epistemic *would (have),* as for example in *He*

[1] Following the recent literature on counterfactuals, I take counterfactuality to cover both the past and the non-past, because speakers can treat both as 'counterfactual' in context. We may compare the counterfactual conditional sentence 'If he were rich, he would not drive around in such a cheap car'; here, the person referred to may in fact be rich and have chosen to drive a cheap car, but the point is that the speaker uses this counterfactual sentence to suggest that he *cannot* be rich.

should have called the police or *If only he would have done that*. In fact, the most important developmental hypothesis which has been proposed for counterfactuals was based on the observation that counterfactual conditionals change in temporal reference diachronically (Dahl 1997); in particular, it was observed that previously past-referring counterfactual conditionals (i.e. their first counterfactual usage) often came to include non-past reference over time (i.e. as a next developmental stage). Since its original proposal, similar developmental trajectories have been found in other language histories including across different types of counterfactual constructions, such as English (Molencki 1999) and Ancient Greek (la Roi 2022b; 2024a;b), thereby refining the concept of the so-called counterfactual *life cycle* (see section 2 below for an overview and la Roi forthcb for detailed theoretical discussion).

In this contribution, I aim to demonstrate that the diachronic evidence for counterfactual constructions from the history of Latin and the Romance languages can offer us many new insights into the life cycles of counterfactual constructions. I take into account different types of counterfactual constructions (viz. counterfactual modal verbs and moods) and address three particular areas which are of theoretical interest to the general development of counterfactual constructions as well as of descriptive interest to the history of Latin and the Romance languages. First of all, there is much more variation in the temporal reference range which counterfactual constructions have in Latin than is usually assumed (e.g. in reference grammars), not only synchronically in the different periods but especially when one compares the different periods. While we have insightful diachronic overviews with various foci (e.g. Blase 1888; Sabaneeva 1996; Haverling 2013), these works focus in particular on the counterfactual subjunctive and hence disregard, among other things, the modal verbs which function as another important means to express counterfactuality (cf. already Kühner and Stegmann 1912, 1:173). Second, corpus-based studies of counterfactuals, rather than the various overviews based on secondary sources such as grammars and histories, have generally limited themselves to one, typically better known period (e.g. Melo 2007 on Plautus and Terence in Archaic Latin). This leaves substantial gaps to be filled by further corpus-based studies. Due to its large chronological scope, the current paper can count as only one step in this direction. Third and finally, we have not exploited the possibility of tracing the life cycles of counterfactuals from Latin into the different Romance languages yet (though see Patard 2020 for counterfactual conditionals from Latin to French).

Therefore, I use the corpus evidence for counterfactual modal verbs and moods from Latin to Romance to enrich our understanding of counterfactuals in the different diachronic periods of these languages, on the one hand, and of the life cycles of counterfactuals more generally, on the other hand. To that end, section 2 further introduces the concept of the counterfactual life cycle, illustrating the three main stages of development that counterfactuals undergo diachronically. In section 3, I provide a diachronic study of counterfactual modal verbs of different modality types from Archaic to Classical Latin, based on a corpus study of past boulomaic, deontic and epistemic modal verbs in different authors from those periods. In section 4, I assess the life cycles of counterfactual mood from Archaic to Postclassical Latin. Next, I turn to the wider diachronic picture and discuss the diachronic development of counterfactuals from Latin into the Romance languages of Spanish, Italian and French, based on a diachronic parallel corpus study of bible translations. To accommodate the reader, I start section 3 to 5 with a brief overview of how my corpus data was gathered.

2 The life cycles of counterfactual constructions

The concept of the *life cycle* of the counterfactual was proposed by Dahl (1997). Combining diachronic observations on counterfactual conditionals in Bulgarian and several Germanic languages, he suggested that counterfactual constructions start out with reference to the past, but subsequently extend their temporal reference to cover the non-past. The latter may be illustrated briefly with the following two examples from English (which he had taken from Jespersen 1925, 266) and Swedish:

(1) If I **had had** money enough (at the present moment), I would have paid you (now). (English)

(2) Om jag **hade haft** pengar nu, skulle jag ha betalat dig; (Swedish)

These counterfactual conditionals show the use of the pluperfect, a construction which had become part of counterfactual conditionals earlier on in the Germanic languages, but, as shown by examples 1 and 2, now also came to be used to refer to the non-past. As such, they synchronically compete with other tense-aspect options to express present-referring counterfactual conditionals, just as multiple tense-aspect configurations can express counterfactuality in both the past and non-past in different languages (cf. la Roi forthcb). Since 1997, there had been few diachronic examinations of the life cycles of counterfactuals (e.g. Molencki 1999 on the history of English), but more recently this issue had been taken up by Yong (2018), Patard (2020) and la Roi (2022b; 2023; 2024a,b); Yong incorporated additional evidence for shifts from past-referring to non-past-referring counterfactuality from the secondary literature. Patard analyzed counterfactual conditionals from Latin into French, tracing the replacement of the subjunctive by the imperfect indicative. In several diachronic corpus studies of Ancient Greek, I have shown that counterfactual moods and modal verbs undergo a host of changes which are associated with the counterfactual life cycle (see la Roi forthcb for a summary). On the one hand, these studies have generally confirmed several developmental tendencies:

(i) counterfactuals change from a stage of past-referring counterfactuality to non-past counterfactuality,
(ii) these changes affect counterfactuals in languages with different TAM systems (cf. the evidence offered from aspect prominent Bulgarian and Ancient Greek versus tense prominent English), and
(iii) the substitution of counterfactual moods by past indicatives and modal formations is pervasive across the history of Indo-European languages (see la Roi 2024b for a diachronic typological study and section 4 for a brief summary).

On the other hand, previous proposals do differ on some theoretical grounds, in particular as to how many stages of development are identified and whether the diachronic process is conceived as a cycle or spiral (see la Roi forthcb for a theoretical comparison). I follow la Roi (forthcb) here in distinguishing only three stages that are each distinguished by a difference in function. Rather than assuming a cyclical development with one particular endpoint (e.g. Patard 2020), we can use this conception of the life cycle to pinpoint the role of different diachronic processes, pragmatic mechanisms and other factors at each stage of the life cycle. Below I list the stages of the counterfactual life cycle:

Stage 0 Construction A does *not* have a counterfactual usage
Stage 1 Construction A has a *past-referring* counterfactual usage
Stage 2 Construction A has a *non-past* referring counterfactual usage
Stage 3 Construction A has an *unstable* counterfactual usage as is evidenced by:
  a) Construction A develops a post-counterfactual function with non-past reference
  b) The counterfactual usage of A is strengthened with additional marking,
  c) Counterfactual usages of A are substituted by another construction,

Next, I briefly illustrate the three different stages of the counterfactual life cycle with examples from Ancient Greek. The reason that I use examples from Ancient Greek diachrony is that we can trace the origins and development of new counterfactuals and the demise of older counterfactual constructions in the corpus evidence from Ancient Greek, whereas overviews based on synchronic snapshots (e.g. Dahl 1997, Yong 2018) make this much more difficult. In the first stage of the counterfactual life cycle, a construction which did not have a counterfactual usage before obtains a counterfactual usage. This can

be illustrated with the example of the following deontic modal verb which obtained an additional usage as a past-referring counterfactual in Classical Greek, as in example 3 below:

(3) κἄγωγ' ἄρ' οὐκ ἔθνησκον **οὗ μ' ἐχρῆν θανεῖν**

I did not die, it now appears, **when I ought to have died** (E. *Hec.* 231)

The immediate context of this example clearly indicates the counterfactual meaning of this modal expression: the speaker did *not* die. Thus, the use of the deontic modal in combination with the past generates the implicature that this person did not die, constituting a reversal of the polarity of the structure (la Roi 2023), as ought to + PAST event X = NOT past event X (see Van linden and Verstraete 2008 for the role of scalar implicatures in the genesis of such counterfactual meanings).

Other diachronic processes may be involved in stage 1 of the counterfactual life cycle as well. This is for example demonstrated by the role played by insubordination in the domain of counterfactual wishes in Archaic Greek. Insubordination refers to the diachronic conventionalization of main clause uses by formally subordinate clauses (Evans 2007, 367); insubordinate constructions are not only syntactictically but also discursively independent (D'Hertefelt 2018, 182–83; la Roi 2021, 6–9), which means that their illocutionary force is not co-constructed with parts of the linguistic context, such as syntactically independent usages of subordinate clauses anchored to previous utterances in dyadic contexts (see la Roi 2022a for a typology of insubordination in Archaic and Classical Latin). Example 4 from Archaic Greek shows that an insubordinate counterfactual wish structure had been developed in Archaic Greek, as a competitor to the inherited counterfactual use of the wish optative (e.g. Od. 18.79-80 νῦν μὲν μήτ' εἴης, βουγάϊε, μήτε γένοιο 'I wish that you did not exist, braggart, nor had been born').

(4) **εἰ γὰρ** ἐγὼν οὕτω γε Διὸς πάϊς αἰγιόχοιο

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

'For my part **I wish** that **I lived** all my days as surely the son of Zeus who bears the aegis, and the queenly Hera **had conceived** me (Il.13.825–826)

The impact of insubordination on the counterfactual domain should perhaps not come as a surprise, because there is substantial cross-linguistic evidence for the productivity of insubordination in the genesis of counterfactual wishes, e.g. *If only* English*, Si (seulement)* French, *Wenn nur* German, *Que* Spanish, *Bare* Danish, *Als (maar)* Dutch (see la Roi 2021, 6 for an overview).

Lastly, I would like to point out the importance of the synchronic *layering*[2] of counterfactual strategies, because different counterfactual strategies of different ages and developmental status may co-occur synchronically (cf. the synchronic competition in Archaic Greek caused by novel insubordinate counterfactual wishes), even within the same text. In example 5 from the Iliad, we see that the older, inherited counterfactual use of the optative to refer to the past is found side-by-side with the innovative, past-referring counterfactual use of the past indicative.

(5) Καί νύ **κεν** ἔνθ' **ἀπόλοιτο** ἄναξ ἀνδρῶν Αἰνείας,

εἰ μὴ ἄρ' ὀξὺ **νόησε** Διὸς θυγάτηρ Ἀφροδίτη

'And now the lord of men, Aeneas, **would have perished**, had not the daughter of Zeus quickly

[2] Cf. Narrog and Heine (2021, 46): "Layering means that new layers of structure arising via grammaticalization may coexist with older layers within a broad functional domain of a language, with the two, or more kinds of layers interacting with one another". The notion was first proposed by Hopper (1991).

noticed' (i.e. and prevented it, being a god) (Il. 5.311-312)

In the second stage of the counterfactual life cycle, counterfactual constructions develop uses that refer to the non-past. As may be expected, these stages may not be separated neatly in the diachronic corpus data in that the evidence for stage 1 and 2 belong to *different* periods (cf. example 4 above where we find two counterfactual wish optatives within the same insubordinate construction but with reference to the past and non-past). What has become particularly clear from recent research, though, is that aspectual factors play a crucial role in determining the speed with which counterfactuals transition from stage 1 to stage 2 counterfactuality. As illustrated in recent studies of Ancient Greek counterfactuals (la Roi 2022b; 2023; 2024a), the counterfactual constructions that develop stage 2 counterfactuality the fastest are those that profile the counterfactual event without attention to its boundaries, i.e. those with imperfective aspect, especially in combination with atelic state of affairs. It is therefore no coincidence that the only two examples of counterfactual indicatives in declarative sentences in Homer (i.e. Archaic Greek) which already refer to the non-past are found in the imperfect and concern atelic state of affairs, as illustrated in example 6 below:

(6) αὐτὰρ Ὀδυσσεὺς

ὤλετο τῆλ', ὡς καὶ σὺ καταφθίσθαι σὺν ἐκείνῳ

ὤφελες· οὐκ **ἂν** τόσσα θεοπροπέων **ἀγόρευες**,

οὐδέ κε Τηλέμαχον κεχολωμένον ὧδ' ἀνιείης,

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 (Od. 2.182-185).

Note how example 6 shows an imperfective indicative with an atelic event, i.e. would continue to proclaim. Observe also the synchronic layering in this example of the novel counterfactual strategy in the indicative with the older counterfactual strategy of the optative (viz. ἀνιείης 'would be urging').

Similarly, there is a large group of modal verbs in Classical Greek which occur almost exclusively in the imperfective and predominantly occur in non-past usage in atelic contexts (as in example 7 below):

(7) εἶέν, τί σιγᾶις; **οὐκ ἐχρῆν** σιγᾶν, τέκνον,

(Phaedra is silent.) Anyway, why are you silent? **You ought not** to be silent, child (E. *Hipp.* 297)

To illustrate briefly, the deontic modal verb ἐχρῆν 'should' occurs in atelic contexts 80% of the time in fifth-century (=34 out of 42) and a 100% (=3 out of 3) in fourth century Classical Greek, while the present-referring use of ἔδει occurs in atelic contexts 87,5 % of the time in fifth-century and 84% of the time in fourth-century Classical Greek. As argued in la Roi (2023;2024a), the unbounded perspective that the imperfective provides on an event without end (i.e. atelic state of affairs) generated the temporal reference shift from the past to the present, not only for modal verbs but also for inflectional moods (cf. la Roi 2022a for the dominance of this group in the data and the fact that the comparatively rare future-referring counterfactuals all are atelic imperfectives).

Furthermore, pragmatics plays a key role in the use of these modal verbs with reference to the present, something which can be seen in example 7 above as well. The nurse reproaches Phaedra for doing something that is communicatively undesirable, viz. remaining silent. The present-referring counterfactual usage of this modal verb thus allows the speaker to deny the desirability of *ongoing* events. Though it has been argued that such past uses of counterfactual modal verbs function as markers of negative politeness such as deference and hedges (e.g. Ruiz Yamuza 2021 with respect to these modal

verbs in Classical Greek), I would instead contend that *impoliteness* is the crucial function of these counterfactual deontic modals: we find them often in contexts of impoliteness, where the deontic modal expresses a form of *reproach*, but deontic pasts are known to develop reproachative functions cross-linguistically (see Van Olmen 2018 on the reproachative function of counterfactual "past imperatives"). Furthermore, though the imperfective would then seem to be the ideal candidate for developing non-past usages, it would be misleading to think that the imperfective is the *only* marker that develops such counterfactual usages (cf. the use of pluperfects to refer to the non-past discussed above); after all, the aorist indicative not only progressed to stage 2 counterfactuality in specialized wish constructions in Archaic Greek already (la Roi 2022b, 266–75), but stage 2 counterfactuality is achieved across the aspectual board in Classical Greek, since counterfactual indicatives occur with non-past readings in the imperfect, aorist and pluperfect in Classical Greek (la Roi 2022b).

Finally, as part of the last stage of the counterfactual life cycle, counterfactuals may become unstable. This instability may result in three potential outcomes. First of all, the counterfactual construction in question may develop a *post-counterfactual* function, as shown by the use of the deontic modal verb in example 8 to refer to a potential non-past (see la Roi 2023; 2024a on the development of this usage by a limited set of modal verbs). The development of this usage means that it starts to compete with present usages of these modal verbs, comparable to how English came to use originally past modal verb such as *ought* to refer to the non-past (e.g. He ought to come to the party).

(8) ἐν ᾧ ἔλεγον ὡς **χρῆν** ὑμᾶς εὐλαβεῖσθαι μὴ ὑπ' ἐμοῦ ἐξαπατηθῆτε ὡς δεινοῦ ὄντος λέγειν

when they said that you **must be** on your guard not to be deceived by me, because I am a clever speaker. (Pl. *Ap.* 17a5-7)

Most likely, the origins of this use lie in the generation of another temporal implicature: moving from a contextual suggestion that something should be the case when it is not (=stage 2 present-referring counterfactuality) to simply pointing out that something should be the case (=non-past necessity), whether that is the case or not. In other words, the counterfactuality of the non-past usage is bleached away. Secondly, the counterfactual construction may undergo reinforcement with extra marking, i.e. the "mechanism whereby a grammatical marker A is supported by some additional expression B 'strengthening' the meaning of A, the new marker thus being AB" (Narrog and Heine 2021, 121). In particular, there is evidence for analogical strengthening of counterfactual constructions, not only in the domain of modal verbs which need not occur with the modal particle but started to occur with the modal particle via analogical levelling with this common usage (see la Roi 2023;2024a), but also in the domain of wishes. In Middle Post-Classical Greek (I – III CE), there are some novel insubordinate wish patterns that came to use the modal particle analogically this way (la Roi 2021, 24–25), as in example 9 below:

(9) καὶ **εἴθε** γε **κἂν** ἐκείνου εἰς κόρον **ἦν** πιεῖν, νῦν δὲ πολλάκις αἰτήσαντος ὁ παῖς "οὐδ' ἀΐοντι ἔοικεν. (Luc. Merc. Cond. 26.40-43)

If only you might have had your fill now, even of that! But as things are, though you ask for it repeatedly, the page "hath not even the semblance of hearing"!

Third and finally, a counterfactual construction may be substituted by another construction. An example already mentioned above is the replament of the older, inherited counterfactual optative by the innovative, counterfactual indicative (contrast their synchronic layering in Archaic Greek versus the loss of the counterfactual optative by the time of Classical Greek); in fact, this process is particularly pervasive in the domain of inflectional moods, because many early Indo-European languages replace the inherited counterfactual optative by other moods, such as the past indicative in Ancient Greek and Latin or the so-called 'conditional mood' in Sanskrit (la Roi 2024b). At the same time, as explained

more extensively in section 5, there are various factors which codetermine the *speed* with which such substitutions take place, such as the role of mood syncretism between alternative strategies and prescriptivist pressures to use older counterfactual structures.

3 Counterfactual modal verbs from Archaic to Classical Latin

It is now time to address the development of counterfactual uses of modal verbs from Archaic to Postclassical Latin (see Magni 2010 for a general overview of Latin modal verbs). The findings presented here are based both on the examples mentioned in the grammars and on a diachronic corpus analysis of all modal verbs in the past tense (perfect and imperfect form) in a selection of authors from different periods. The authors that I selected are Plautus and Terence for Archaic Latin, and Seneca the Younger and Cicero's letters for Classical Latin. The modal verbs were selected to include modal verbs of different modality types: *posse* (dynamic and epistemic modality[3]*), velle* (boulomaic modality), and *debere* (deontic modality). I collected the perfect and the imperfect past forms of these modal verbs by searching in the *Library of Latin texts* (e.g. for the perfect forms using searches such as debui* and for the imperfect using searches such as voleba*). The texts used in this paper also come from the same location. The translations are based on the most recent Loeb translations.[4]

There are several questions which I aim to answer using the diachronic evidence from modal verbs in the history of Latin. First of all, I determine which stages of the counterfactual life cycle these modal verbs go through (e.g. only stage 1 of past-referring counterfactuality, or also other stages). Second, I assess the correlations between the type of modality of a modal verb (e.g. boulomaic, deontic, epistemic, cf. Magni 2010 for an overview of Latin modal verbs) and the degree to which it develops different stages of the life cycle (cf. the fact that the most productive counterfactual modal verbs in Classical Greek were deontic). Third and finally, I offer a contrastive examination of modal verbs in the imperfect and perfect in different periods of Latin in order to identify the impact of the temporal-aspectual system on the genesis and productivity of counterfactual usages (cf. the role of the imperfect in Ancient Greek counterfactuals over other tense-aspect options as discussed above in section 2). To facilitate cross-comparison of the diachronies of these modal verbs, I discuss the developmental histories of the three modal verbs separately, i.e. *velle*, *posse*, and *debere*.

For the boulomaic modal verb *velle*, there is no evidence in my corpus for the development of a counterfactual usage in the Archaic Latin period. Instead, the occurrences found in this period refer to a participant's past volition to carry out an event, as in example 1 below.

(10) chrys. Porro etiam ausculta pugnam **quam uoluit dare.**

But listen further what fight **he wanted to put up**. (Plaut. *Bacch.* 273)

One interesting development that we do already witness in the Archaic period, however, is that this modal verb develops a politeness usage, sometimes called the attitudinal past. In example 11 below the modal verb does not refer to the past, but refers to the present, meaning 'would like'. The temporal reference shift observed in this modal verb may be the result of an temporal-aspectual implicature: since there was an aspectual opposition between the imperfect(ive) and the perfect(ive) in the past indicative (Pinkster 2015, 383; Haverling 2010), the use of the imperfect(ive) may have profiled an unbounded reading of the event (i.e. the state of affairs the speaker wanted to achieve), which has contributed to the shift in temporal reference, viz. I wanted to X in the past *implies* I continue to want X in present.

[3] I write dynamic as well as epistemic, since there are clear uses of this verb to express epistemic possibility already in Archaic Latin (e.g. *potest* 'it is possible', Plaut. *Trin.* 766) rather than just a participant's ability (e.g. *possum* 'I am able').

[4] The Loeb translations can be consulted online: https://www.loebclassics.com/ (last accessed: 31.12.2024).

Politeness of course also plays a role here, since by using the past to refer to a current volition the speaker assigns some distance from the requested thing, as illustrated in example 11 below where this attudinal usage is preceded by a hedging conditional.

(11) Mer. non mirum factum est.

sed **si domi est,** Demaenetum **uolebam**. (Plaut. *Asin.* 451-452)

That's no surprise. **But if he's at home, I'd like** a word with Demaenetus.

Now, the first evidence for counterfactual usage of this modal verb comes from the Classical Latin part of my corpus. Crucially, though, the counterfactual usage is only attested for the *imperfect* form of the modal verb, not only for stage 1 but also for stage 2 counterfactuality. This underlines the pivotal role played by imperfective aspect in the diachrony of counterfactual modal verbs. Before moving to the evidence, I would like to point out one crucial caveat that needs to be considered for a proper evaluation of the distributional evidence of counterfactual modal verbs, or even counterfactuals more generally: one needs to exclude the counterfactual uses of modal verbs found in contexts where the mood form may have had a counterfactual meaning irrespective of the modality expressed by the modal verb. This can be seen in example 12 where the imperfect modal verb *volebas* is indeed counterfactual, but it occurs in a counterfactual conditional protasis, preceding a counterfactual apodosis with a counterfactual subjunctive. At best, such an example can be taken as evidence for the replacement of the counterfactual subjunctive by the counterfactual indicative which started in Classical Latin (see section 4 below). Therefore, I have excluded such examples in the diachronic analysis of counterfactual uses of the modal verbs discussed in this section, because they do not provide independent evidence for the counterfactual usage of the modal verb with an infinitive (even though the secondary literature lists them as evidence for the counterfactual use of modal verbs).

(12) **Si volebas** tibi omnia licere, **ne convertisses** in te ora omnium; **nunc** tantum tibi praestandum est, quantum promisisti. (Sen. *De Cons. Ad Pol.* 6.3)
If you wished to be free to do everything, **you should not have turned** all faces toward you; **as it is**, you must make good all that of which you have given promise.

By contrast, examples from Postclassical Latin such as 13 occur outside such contexts and provide contextual cues that show that the past boulomaic modal verb receives a counterfactual reading: they would have wanted to scream for help, but, as shown by the following clauses, they were prevented by others. The speakers' point in using these volitional counterfactual expressions is to stress that they would have wanted to scream back then, but were prevented in doing so, making it a counterfactual enterprise in the speaker's hindsight point of view.

(13) **volebamus miseri exclamare, sed nec in auxilio erat quisquam**, et hinc Psyche acu comatoria **cupienti mihi invocare** Quiritum fidem malas pungebat, illinc puella penicillo, quod et ipsum satyrio tinxerat, Ascylton opprimebat (Petr. *Sat.* 21.1)
In our distress **we wanted to scream for help, but there was no one to come to our aid**. On the one side Psyche was sticking a hairpin into my cheek, **whenever I wished to call for help**, and on the other the young girl was harassing Ascyltos with a cosmetic brush she had soaked in aphrodisiac.

An example of stage 2 counterfactuality from Classical Latin can be found in Cicero's letters, as shown in example 14 below. Cicero uses this counterfactual to sketch the undesirable situation in which he finds himself now (cf. the counterfactual subjunctive in the relative clause expressing that Piso and his soldiers *do* go there). Note how the modal verb conjoined with the infinitive expresses an atelic state of

affairs, viz. be somewhere else in Epirus, which will have contributed to this stage 2 use of the modal verb, especially in combination with the imperfective aspect of the modal verb.

(14) Plancius, homo officiosissimus, me cupit esse secum et adhuc retinet. ego **volebam loco magis deserto esse in Epiro**, quo neque **Piso veniret nec milites**, **sed adhuc Plancius me retinet;** sperat posse fieri ut mecum in Italiam decedat. (Cic. *Fam.* 14.1.3)

Plancius, who is untiring in his good offices, is anxious to have me with him, and keeps me here. **I wanted to be in some less frequented place in Epirus** where **Piso nor his soldiers would come**, **but Plancius still keeps me here**. He hopes it may turn out that he leaves for Italy in my company.

To sum up, this boulomaic modal verb develops to stage 1 and 2 of the counterfactual life cycle only in Classical Latin and only in its imperfective form.

The past forms of the modal verb *posse* provide a more complicated picture for the development of counterfactual functions; both the perfect and the imperfect form of this modal verb can occur with a counterfactual reading in Archaic and Classical Latin, for which see examples 15 and 16 below from Archaic Latin. In example 15, Peniculus did in fact come at the right time and in example 16 it did not actually happen (even though Syrus claims that it could have[5]).

(15) Men. **Non potuisti** magis per tempus mihi aduenire **quam aduenis**

You couldn't have come at a better time than **the one you're coming at.**

(Plaut. *Men.*139)

(16) Sy. **Scite poterat fieri**

et ego hoc, quia dudum tu tanto opere suaseras,

eo coepi. (Ter. *Haut.* 785-787)

Sy. **It could have happened you know**. I only suggested it because you urged it so

strongly just now.

In other words, both temporal forms may generate stage 1 counterfactuality. What sets them apart, though, is their diachronic trajectory: only the imperfect form goes on to develop into stage 2 counterfactuality, in Classical Latin. In the following example from Seneca, the modal verb cannot be taken in its original meaning (viz. X was possible in the past), but refers to the current counterfactual scenario (according to Seneca's reasoning of course) that living things *can* survive and want to. Note also the counterfactual sentence that follows (in the innovative counterfactual indicative and inherited counterfactual subjunctive) and continues this line of counterfactual reasoning.

(17) Haec nihil magis quam tutelam sui et eius peritiam tradidit, ideoque etiam simul incipiunt et discere et vivere. Nec est mirum cum eo nasci illa, sine quo frustra nascerentur. Primum hoc instrumentum in illa natura contulit ad permanendum, conciliationem et caritatem sui. **Non poterant salva esse, nisi vellent. Nec hoc per se profuturum erat, sed sine hoc nulla res profuisset.** (Sen. *Ep.* 122.24)
Nature has communicated nothing except the duty of taking care of themselves and the skill to do so; that is why living and learning begin at the same time. No wonder that living things are born with a gift whose absence would make birth useless. This is the first equipment that Nature granted them for the maintenance of their existence—the quality of adaptability and self-love. **They could not survive if**

[5] Cf. how people use 'could have' to refer to something that in their eyes was possible in the past but did not materialise (e.g. we could have won the game).

they did not desire to do so. Nor would this desire alone have made them prosper, but without it nothing could have prospered.

Moreover, similar examples are attested in Postclassical Latin, as in example 18 from Petronius, confirming that this stage of the life cycle continued to be relevant from a communicative perspective.

(18) statim Trimalchio **'poteram quidem'** inquit 'hoc fer[i]culo **esse contentus**; secundas enim mensas habetis. <sed> si quid belli habes, affer'. (Petr. *Sat.* 68.2)

At once Trimalchio said: "**I could in fact have been satisfied** with this course (now), for you've got your second tables. But if you've anything nice, bring it in."\

Note that this example too shows a non-past usage with an *atelic* state of affairs (viz. 'be content', *esse contentus*).

Summarizing, the modal verb *posse* developed counterfactual usages in both the perfect and the imperfect, but *only* its imperfective form developed into stage 2 of the life cycle, a usage that continued into Postclassical Latin. These findings corroborate the caveat outlined above that counterfactuals with different aspectual make-ups may develop into the different stages of the life cycle, but the imperfect, especially with atelic events, is the form par excellence to develop into later stages of the counterfactual life cycle, in particular compared to alternative counterfactual expressions available in the system (e.g. past-referring counterfactual *potui).*

Lastly, I turn to the evidence for the life cycles of counterfactuals from the deontic modal verb *debere* in Archaic and Classical Latin. Before developing its counterfactual meaning, this modal verb expressed a necessity for a past event to take place in the past, without implying anything about the realization of this event.[6] In Archaic Latin, this modal verb does not have this past counterfactual use yet in my corpus. In Classical Latin, however, both the perfect and the imperfect form are found in past counterfactual contexts, as illustrated by examples 19 and 20 below. In example 19, Brutus did not receive his life from the deified Julius, the philosophical question under discussion in this paragraph. In example 20, the addressee did reprove the man too much in the (recent) past.

(19) Quanta vero illum aut rerum naturae aut urbis suae tenuit oblivio, qui uno interempto defuturum credidit alium, qui idem vellet, cum Tarquinius esset inventus post tot reges ferro ac fulminibus occisos! Sed **vitam accipere debuit**, ob hoc tamen non habere illum parentis loco, quia in ius dandi beneficii iniuria venerat; non enim servavit is, qui non interfecit, nec beneficium dedit, sed missionem. (Sen. De Ben. 2.20.2-3)
How forgetful, in truth, he was, either of the law of nature or of the history of his own city, in supposing that, after one man had been murdered, no other would be found who would have the same aims—although a Tarquin had been discovered after so many of the kings had been slain by the sword or lightning! But Brutus **ought to have received his life**, yet without regarding Caesar in the light of a father, for the good reason that Caesar had gained the right to give a benefit by doing violence to right; for he who has not killed has not given life, and has given, not a benefit, but quarter.

(20) Illum liberius admonuisti **quam debebas**, itaque non emendasti, sed offendisti: de cetero vide, non tantum an verum sit quod dicis, sed an ille cui dicitur veri patiens sit; admoneri bonus gaudet, pessimus quisque rectorem asperrime patitur. (Sen. De ira 3.36.4)

[6] It developed this deontic modal force from the lexical meaning 'owe', a change which is relatively common, cf. Ancient Greek ὀφείλω 'owe > ought' (Allan 2013).

You reproved that man more frankly **than you ought to have**, and consequently you have not so much mended him as offended him. In the future, consider not only the truth of what you say, but also whether the man to whom you are speaking can endure the truth. A good man accepts reproof gladly; the worse a man is the more bitterly he resents it.

In a similar way to the counterfactual uses of *posse*, only the past imperfect(ive) form of debere develops into later stages of the counterfactual life cycle. In fact, most likely due to its imperfect(ive) form it obtains stage 2 and 3 counterfactuality rather rapidly in Classical Latin. In example 21 below, we witness that stage 2 counterfactuality may even occur with *telic* state of affairs, as we witness the use of the imperfect(ive) to view a non-past counterfactual event in a incomplete way, thereby providing a competitor to the imperfect(ive) subjunctive; the counterfactual is used to express that mixing in fact does *not* happen in the stomach but outside it. Such examples tie in with the cross-linguistic evidence discussed in section 2 which shows that over time stage 2 counterfactuality need not be limited to atelic imperfectives.

(21) Totam dissecti structique sine ullis ossibus mulli constraverant. Piget esse iam singula; coguntur in unum sapores. **In cena fit**, **quod fieri debebat in ventre.** (Sen. *Ep.* 95. 27)
In these days we are ashamed of separate foods; people mix many flavours into one. **The dinner table does work which ought to be done in the stomach**

Interestingly, there are also examples which testify to the development into the last stage of the counterfactual life cycle, in particular the development of a post-counterfactual usage which must have developed out of stage 2 counterfactuality referring to the non-past (as also attested for ἔδει and ἐχρῆν in Classical Greek, see section 2 above). In both example 22 and 23, it appears that the past imperfective modal expresses that something ought to be done now or in the near future but without an explicit contextual indication that this is not done now, cf. how in example 22 Seneca could in fact respond with those exact words. Thus, both forms develop a past counterfactual use in Classical Latin, i.e. stage 1 of the counterfactual life cycle, but only the imperfect(ive) develops into later stages of the counterfactual life cycle, viz. stage 2 and 3.

(22) et istis dicentibus "quo usque eadem?" responde: "ego **debebam dicere** 'quo usque eadem peccabitis?'" (Sen. *Ep.* 89.19)
to those who say: "How long will this unending talk go on?" answer with the words: "I **ought to say** 'How long will these unending sins of yours go on?'"

(23) Quidni gratias illi hoc nomine agam? **quicquid debebam nolle,** non possum. Cum libellis mihi plurimus sermo est. (Sen. *Ep.* 67.2)
Why should I not thank old age on this account? **That which I ought to wish** not to do, I lack the ability to do. Most of my converse is with books.

In conclusion, the contrastive diachronic investigation of these modal verbs has yielded several insights. First of all, we have found that modal verbs of different types may develop stage 1 counterfactuality (i.e. with reference to the past), as indicated by the past counterfactual uses of *posse* and *debere* in both the perfect(ive) and imperfect(ive) indicative. Second, there is a notable impact of temporal aspectual factors on the development of next stages of the counterfactual life cycle: the imperfect(ive) past forms are the forms par excellence to develop further into stage 2 or even stage 3 of the counterfactual life cycle, whereas the perfect(ive) form remain limited to stage 1 counterfactuality.

These results can in my view be interpreted as an effect of *language ecology*[7], i.e. as the reflection of systemic factors on the creation and degree of diffusion of innovations within the system of a language: the synchronic temporal-aspectual system of Latin codetermined the speed with which certain counterfactual modal verbs develop.[8] Also, we have found evidence that underlines the relevance of *atelic* state of affairs in the transitions from stage 1 to stage 2 counterfactuality, since the combination of imperfect(ive) with an atelic state of affairs allows the temporal reference to switch faster. Third and finally, the developmental pathways attested by these modal verbs provide evidence for paths out of counterfactuality, as shown by the non-past deontic use of *debebat* without its previously counterfactual force. The following figure summarizes the diachronic pathways documented in the corpus study above[9], keeping in mind of course that the synchronic *layering* of diachronically different strategies (esp. in Classical Latin) cannot be represented in this figure.

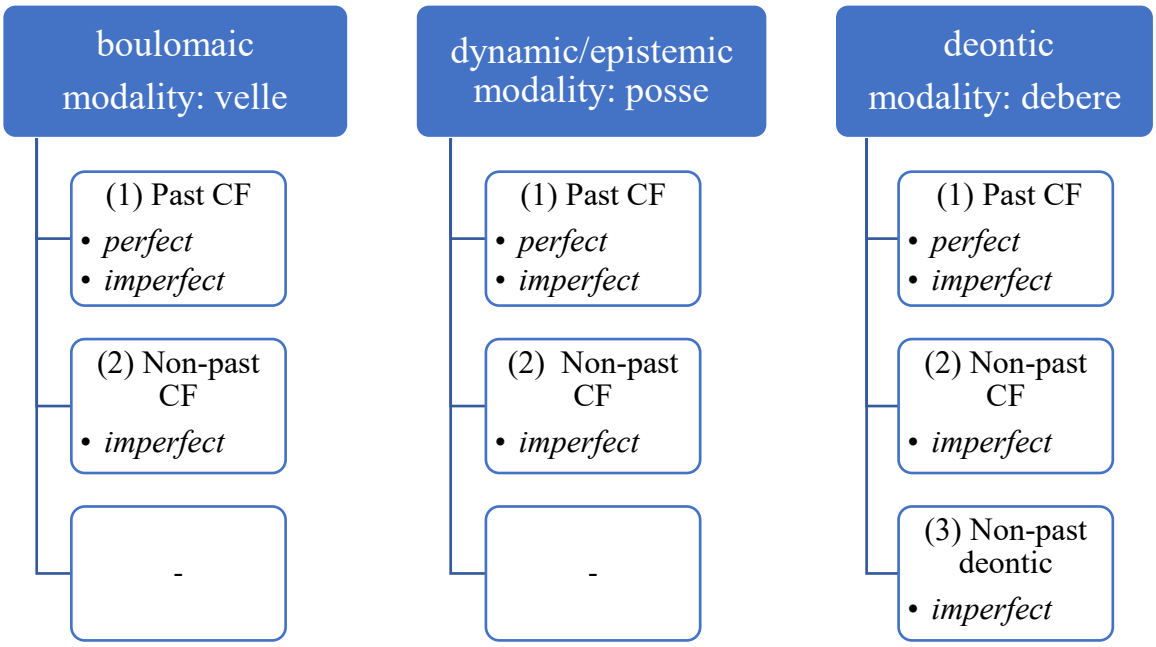

Figure 1 The life cycles of counterfactual modal verbs from Archaic to Classical Latin

4 The life cycles of counterfactual moods from Archaic to Postclassical Latin

In Latin, we find the inherited counterfactual use of the optative syncretized in what is generally called the 'subjunctive' (Clackson and Horrocks 2007, 213), a strategy that undergoes replacement over time. Though there have been many studies on the subjunctive from different angles (Blase 1888; Sabaneeva 1996; Mesa Sanz 1998; Haverling 2013), I would argue that there are still significant gaps in our knowledge of counterfactual moods in the different periods of Latin. One particular problem, in my

[7] Language ecology plays a role for the productivity of counterfactual modal verbs as well: the counterfactual uses of *velle* and *debere* have a higher distribution than that of *posse,* since there are clearer alternatives within the system for *posse* in Archaic and Classical Latin, such as the counterfactual subjunctive or indicative.

[8] For another study of Latin tense, aspect and modality that correlates innovations with systemic factors, see Aerts forthc.

[9] Crucially, these results provide a stark contrast with the simplifying overview of the possible temporal references which earlier grammars have attributed to such modal verbs, e.g. Kühner and Stegmann (1912, 1:171–72).

view, is that there seems to have been a tendency to simplify the large degree of variation which exists both synchronically and diachronically in terms of which moods could express which temporal references, especially by following what is found in reference grammars which will inevitably have to simplify synchronic and diachronic variation. To illustrate this point briefly, the simplified overview found in the reference grammar of Hofmann and Szantyr (1965, 333–34, my highlighting) is remarkably close to what is found in recent scholarship (e.g. Melo 2007; Haverling 2013):

"Die Verteilung der Tempora ist zunächst nicht streng durchgeführt. - a) Im **Altlatein** steht für den unerfüllbaren **Wunsch in der Gegenwart sowohl der Konj. Praes. wie der Konj. Impf**, (doch überwiegt z. B. bei Plt. entschieden der erstere (...). **Noch in klassischer Zeit steht öfters der Konj. Praes., wo man den Konj. Impf, erwarten würde** (...) - b) **Der Irrealis der Vergangenheit steht bereits im Altlatein meist im Plqpf**. (si appellasses, respondisset Plt. Trin. 927); **daneben begegnet auch der Konj. Impf., der ja auch sonst noch die Vergangenheits bedeutung gewahrt hat** (s. unten IV b); vgl. den Gegensatz Plt. Bacch. 635 si mihi sit, non pollicear :: scio, dares 'wenn ich das Geld hätte, ließe ich's nicht beim bloßen Versprechen bewenden' :: 'ich weiß, dann hättest du es längst gegeben' (kaum genügend dagegen Thomas, Subj. 227 f.); **so noch oft Cic**., besonders wenn Zeitpartikeln wie tum die Vergangenheitsbedeutung stützen (z. B. Phil. 8, 14 num igitur eum, si tum esses, temerarium civem . . . putares), **später nur noch vereinzelt bei Dichtern** (z. B. Iuv. 7, 69 und im Spätlatein, wo z.T. Gräzismus vorliegt (s. § 179 Zus. a). Im selbständigen Wunschsatz begegnet der **Konj. Impf**, **in Vergangenheitsbedeutung mehrfach im Altlatein** (z. B. Plt. Capt. 537 utinam te di prius perderent quam periisti e patria tua\ öfters veilem 'ich hätte gewollt'), **später nur ganz vereinzelt**, so bei Drac. Orest. 344 aus metrischen Gründen (s. Blase 154)."

In these few lines a very large diachronic picture is sketched of multiple centuries, using imprecise characterizations such as 'often' and 'still' to characterize the distribution of counterfactual mood forms and their temporal reference ranges. In recent studies, some of these points have been repeated even though I would argue that their quantification deserves further corpus-based scrutiny, something for which I can only make a first attempt below but for which I offer three brief illustrations here.

Firstly, De Melo (2007, 80) remarks about the use of the present subjunctive to refer to the counterfactual present in Archaic Latin that it might as well have been in the imperfect (cf. this idea in the quote above), but this situation differs per author; Plautus has relatively more present-referring uses of the counterfactual present than Terence (Thomas 1938, 202–3). Secondly, Haverling (2013, 41) concludes that the imperfect subjunctive ousts the non-past usage of the counterfactual present (cf. Handford 1947, 32 for similar remarks on wishes with the subjunctive), even though she also observes that the imperfect subjunctive has both past and non-past functions in Archaic as well as Classical Latin (as also noted by Hofmann and Szantyr 1965, 332). Rather than directly pitting the different temporal-aspectual options to each other, I suggest below that the wide range of temporal references of counterfactual subjunctives (and indicatives) is a sign of a higher degree of layering per period: every strategy has its synchronic role within the counterfactual system, but also undergoes distinct changes. Third and finally, we find simplifications of the counterfactual system in grammars which do too little to incorporate the large degree of temporal reference variation; for example, Pinkster (2015, 482), even though he offers many additional distributional observations elsewhere in his reference work (cf. below), seems to misrepresent the temporal references of counterfactual subjunctives by speaking about Latin as one homogenous diachronic variety: "Furthermore, pluperfect subjunctive forms, when used counterfactually, cannot be described as anterior to a past reference point; rather, they simply situate the counterfactual event in the past. The imperfect subjunctive, on the other hand, situates a counterfactual event in the time of speaking."

Now, there are at least three ways in which we could further refine our understanding of the life cycles of counterfactual moods in the history of Latin, both from a methodological and a descriptive

perspective. First of all, there is evidence for different stages of the counterfactual life cycle already in Archaic Latin and, crucially, across different temporal-aspectual configurations. In Archaic Latin, we find the subjunctive in the pluperfect to refer to the past (see Pinkster 2015, 496 with examples) and the imperfect to refer to the past, see example 24 below.

(24) quid uis fieri? factum est illud: fieri infectum non potest.

deos credo uoluisse; nam ni **uellent**, non **fieriest**, scio. (Plaut. *Aul*. 741-742)

What do you want to happen? It's done. It can't be undone. I believe it is the will of the gods: **if they hadn't wanted it, it wouldn't have happened**, I know that.

Moreover, the imperfect and present subjunctive are found in contexts to refer to the counterfactual non-past (e.g. Handford 1947, 121; Clackson and Horrocks 2007, 213). In fact, as observed by Pinkster (2015, 508), these non-past counterfactual uses of the subjunctive are especially frequent in the specialized constructions of wishes (cf. Pl. *Am.* 575 *Utinam ita essem* 'I wish I were'), in particular in what have been called insubordinate wishes (see la Roi 2022a who compares insubordinate wishes with ut, utinam and si in different periods of Latin to insubordinate wishes found cross-linguistically). All this confirms that the subjunctive was already used for stage 1 and stage 2 of the counterfactual life cycle, also when it underwent morphosyntactic innovation due to insubordination. In fact, it has recently been suggested that stage 3 was also already attested in Archaic Latin. I have suggested (la Roi 2024b) that the use of the subjunctive to refer to the hypothetical non-past, e.g. in potential or conditional statements (Handford 1947, 87–97), may be interpreted as evidence for stage 3 of the counterfactual life cycle. After all, the problem with this 'potential' function of the subjunctive had been that it could not be traced back to the subjunctive part of the Latin 'subjunctive' (cf. Handford 1947, 93 on this point), but this is because it would have originated in the optative part which syncretized into the subjunctive and had gone through the counterfactual life cycle in many different early Indo European languages. Below in table 1, I therefore reproduce the diachronic typology of counterfactual moods in early Indo-European languages from la Roi 2024b in order to highlight how similar the developmental trajectory in Latin was to that of other early Indo-European languages. I used OPT for the optative, COND for 'conditional' moods, SBJV for the subjunctive and IND for the past indicative to demonstrate that the inherited optative went through its counterfactual life cycle before being replaced by other mood formations.[10]

Language		1. Past CF		2. Non-Past CF		3. Hypothetical
Greek	Archaic Greek	OPT	IND	OPT	IND	OPT
	Classical Greek	IND		IND		OPT
Indo-Aryan	Vedic Sanskrit	OPT		OPT		OPT

[10] One might be tempted, like Pinkster (2015, 660) and Haverling (2013, 37), to suggest that instances in Archaic Latin of matrix clauses with a perfect and an adverb meaning 'almost' (e.g. *paene*) with a counterfactual conditional clause in the subjunctive (e.g. Pl. *Per.* 594-595) count as evidence for the replacement of the counterfactual subjunctive by the indicative. However, I would disagree with this. This particular strategy is a so-called *avertive* strategy (Kuteva et al. 2019), which expresses that a past action was imminent but was not completed. This meaning is often but not exclusively marked by a past perfective across languages (see la Roi 2023 for telic imperfective examples from Classical Greek). In other words, avertives may occasionally occur in canonical counterfactual contexts but this does not need to interpreted as evidence for the replacement of other, older counterfactual strategies in those contexts, as also seen in the occasional examples of *poterat* in counterfactual conditionals in section 3 (in contrast to Haverling 2013, 37 who interprets such examples as diachronic evidence for replacements).

	Post-Vedic Sanskrit	COND		COND		OPT	
Iranian	Avestan	OPT		OPT		OPT	
	Old Persian	OPT		OPT		OPT	
Germanic	Gothic	OPT		OPT		OPT	
	Old English	SBJV	IND	SBJV	IND	SBJV	
	Old High German	SBJV		SBJV		SBJV	
Latin	Archaic Latin	SBJV		SBJV		SBJV	
	Classical Latin	SBJV	IND	SBJV	IND	SBJV	
	Postclassical Latin	SBJV	IND	SBJV	IND	SBJV	IND
Irish	Old Irish	SBJV	IND	SBJV	IND	SBJV	
Tocharian	Tocharian A & B	COND		COND		OPT	
Armenian	Classical Armenian	IND		IND		-	
Anatolian	Hittite	IND		IND		-	
Albanian	Albanian	IND		IND		-	
Slavic	Old Church Slavonic	COND		COND		OPT	

Table 1 A diachronic typology of counterfactual mood in early Indo-European languages

Second, there is much more diachronic variation in Classical Latin already than is suggested in recent work.[11] Haverling (2013) correctly pointed out that innovative uses of the past indicative can be found earlier: one finds examples such as 25 in Cicero where the imperfect past indicative occurs side-by-side with the older strategy (example from Gildersleeve and Lodge 1895, 386) or the use of pluperfect indicatives in counterfactual apodoses (Haverling 2013, 36).

(25) Ipsam tibi epistolam **missisem**, nisi tam subito fratris puer **proficiscebatur** (Cic. Att. 8.1.2)

I should have sent you the letter itself, if my brother's servant was **not starting** so suddenly.

Haverling (2013, 41) suggested that from Archaic to Classical Latin the imperfect subjunctive replaced the present subjunctive in non-past contexts and the pluperfect subjunctive replaced the imperfect subjunctive in past contexts. However, I think that this might simplify the diachronic developments slightly too much, especially because there is a high degree of layering of counterfactual strategies with reference to the past (stage 1) as well as the non-past (stage 2). This becomes especially clear when we consider the wide temporal reference range of subjunctives in counterfactual wishes: not only do we find imperfect subjunctives which still have past reference in Classical Latin (e.g. Cic. *Phil.* 5.5), but also present subjunctives with counterfactual meaning and reference to the non-past in Classical Latin, as in example 26 below, or novel insubordinate wish constructions with non-past reference in Classical Latin, as in example 27:

(26) Plurima signa pulcherrima, plurimas tabulas optimas deportasse te negare non potes; **atque utinam neges**! (Cic. *Verr.* 1.61)

You cannot deny that you brought away a large number of beautiful statues and a large number of fine paintings. **I only wish you would deny it!**

(27) **o si scires,** quam dives et haec fuisset!

'if only you knew how rich this one would have been!' (Sen. Contr. 1.6.7)

[11] This is also what makes the overview of factual, non-factual and counterfactual modality of the subjunctive and indicative provided by the reference grammar of Pinkster (2015, 389) misleading, as he suggests that only the subjunctive occurs with counterfactual modality, despite the fact that he provides many examples of counterfactual uses of the indicative elsewhere in his syntax.

Interestingly, Pinkster (2015, 494) also notes that the imperfect subjunctive is frequently attested with volitional modal verbs (e.g. *nollem, mallem, vellem*) in Archaic and Classical Latin, esp. in Cicero (who has 277 out of the 646 instances of first person forms in the BTL CD-ROM). This would rather support the idea that the subjunctive still dominated the counterfactual domain in these two periods and was not replaced by other markers yet.

Third and finally, the counterfactual system continues to be subject to different changes in Postclassical Latin as well. In Postclassical Latin, Haverling (2013, 43–52) suggests that the imperfect(ive) subjunctive starts to lose its role as main form for non-past counterfactuality, the past indicative develops a 'hypothetical' use, and the pluperfect subjunctive loses its restriction to stage 1 counterfactuality (as she illustrates with some examples from two authors from the 6th and 7th century). Regardless of what the exact distributions will have been, this picture too may need some balancing. On the one hand, it has been demonstrated by Adams (2011, 660–65) that the verb *habere*, after having been grammaticalized as a 'conditional' marker, has developed stage 2 counterfactual uses, as shown in example 28 below where it is found in an apodosis preceding a protasis with the counterfactual imperfect subjunctive:

(28) **sanare te habebat** deus per indulgentiam, si fatereris (Caesarius *Serm.* 59.4 CC 103, 261)

'if you were confessing now (which you are not), God **would be healing you'**

At the same time, there are competing forms of this 'conditional mood' which developed counterfactual functions in Late Latin (see Pinkster 2015:440 *Si voluisset Deus ut mel manducarem, mel habuisti mittere in zippulas istas*. 'If God had willed that I should eat honey you would have been given the honey to mix in those buns.' Vit. patr. 5.4.59).

On the other hand, the above narratives of *changes* to the counterfactual system to my mind miss one major point: the large degree of *stability* in the counterfactual system. We have seen above that the replacement of the counterfactual subjunctive by the indicative in the history of Latin was by no means as clear-cut as the optative by the indicative in the history of Ancient Greek. Instead, the past indicative started eating away at the subjunctive part of the counterfactual system from Classical Latin, but a one-to-one replacement in Classical or Postclassical Latin would be an overstatement (cf. the continued role of inherited subjunctives in Modern Italian). In fact, in the Latin New Testament, which of course was written earlier than the texts discussed just above, we find a productive use of the inherited subjunctive system, with the pluperfect and imperfect subjunctive being used for both stage 1 and stage 2 counterfactuality. It is for this same reason that the Latin New Testament can be taken as a starting point for tracing the life cycles of counterfactual constructions from Latin into the Romance languages in the next section.

5 The life cycles of counterfactuals from Latin into Romance

The substitution of the inherited subjunctive to express counterfactuality that started in Classical Latin had a long and complicated diachronic tail, since modern Romance languages have generally come to use a specific indicative replacement or modal periphrasis to express counterfactuality. In this section, I compare the Latin New Testament (Weber and Gryson 2008) with its modern translations from Romance languages (viz. Spanish, Italian and French) in order to sketch the life cycles of counterfactuals and explain why counterfactuality is expressed the way that it is today in these languages. The comparison yields several insights into the life cycles of counterfactuals across a larger time span as well as into the large range of factors involved in determining the speed of innovations (e.g. language ecology and register).

First of all, all three Romance languages have continued the substitution of the subjunctive by an indicative form, albeit with specific differences across the Romance languages. Let us compare the translations of the counterfactual conditional at John 11.21.[12]

(28) Domine, si **fuisses** hic, frater meus non **esset** mortuus ! (John 11:21)

(29) Señor, si **hubieras estado** aquí, mi hermano no **habría** muerto (La Biblia: La Palabra de Dios para Todos 2005)

(30) Signore, se tu **fossi stato** qui, mio fratello non **sarebbe** morto ! (La Sacre Bibbia 2008)

(31) Seigneur, si tu **avais été** ici, mon frère ne **serait** pas mort (Bible des Peuples 2011)

For the past-referring counterfactual protasis in the pluperfect subjunctive in the Latin version, all three have come to use a perfect periphrasis with a verb form of 'to be', but only the Italian translation still has a subjunctive mood form (fossi), whereas Spanish and French have an indicative mood form. Crucially, though, the indicative mood form in Spanish has its historical origins in a pluperfect indicative, whereas the indicative mood form in French has its origins in an imperfect indicative (Patard 2020). In the apodosis, we find some other constructions that have become part of the counterfactual domain at the cost of the inherited subjunctive, that is, the imperfect in French and the conditional mood formations in Spanish and Italian. Since these conditional moods constitute the fusion of the imperfect of *habeo* with the infinitive, though, all three apodoses in fact share that they used the imperfect as main historical basis for the development of a substitution of the subjunctive. Moreover, comparatively these translations suggest that Italian has been slowest to substitute the subjunctive for a replacement, though the conditional mood has taken over in other environments.[13]

At the same time, it would be prudent to be aware of the tension which exists between the historical origins of a counterfactual replacement and the function that it is acquires over time within the counterfactual system. This point can be illustrated with the repurposing of the Latin pluperfect indicative in the history of Spanish, a process which has been neatly summarized by Penny:

"The only verbal form which has changed its mood value in the history of Spanish is the form *cantara* (< cantāram<cantāveram). Its Latin pluperfect indicative value had been preserved in Old Spanish (see 3.7.4.2(2), 3.7.8.3.2(2)), together with the conditional (or conditional perfect) value which it had acquired in late Latin. But from the fourteenth century *cantara* began to be used as an imperfect subjunctive, coming into competition with *cantas(s)e*, and eventually ousting this form in many varieties of Spanish (3.7.4.3(3))." (Penny 2007, 170)

Though one could counterargue that the characterization "began to be used as an imperfect subjunctive" facilitates a simplified diachronic comparison of TAM systems, this does not detract from the fact that the original use of the Latin pluperfect indicative does not seem to be the same in its role within the TAM system of later varieties of Spanish. In other words, the role that a substitution plays within the synchronic counterfactual system codetermines its spread, as also noted in previous sections with respect to the development of counterfactual moods and modal verbs.

Second, the use of counterfactual subjunctives in the Latin New Testament for stage 2 counterfactuality highlights the synchronic layering of counterfactual strategies involved in the counterfactual life cycle. A diachronic comparison of the translations of the counterfactual at Hebrews

[12] Note that the same forms are found at other places, e.g. Matt. 24.22.

[13] I should underline, though, that conditional mood formations have a much more complex history than sometimes thought, for which see section 4 above.

8.4 shows that the imperfect subjunctive from Latin is still expressed by the imperfect subjunctive in Italian in the protasis, but in the apodosis can already be replaced by the conditional mood. Similarly in Spanish, the 'pluperfect' past indicative is used to refer to the counterfactual present in the protasis but in the apodosis the conditional mood is already found. The French translation of this passage is rather free, as the conditional structure is not retained, but the imperfect indicative replacement is used as expected.

(32) Si ergo **esset** super terram, nec **esset** sacerdos (Heb. 8.4)

(33) Si **sirviera** en la tierra no **sería** un sacerdote (La Biblia: La Palabra de Dios para Todos 2005)

(34) Ora, se **fosse** sulla terra, egli non s**arebbe** neppure sacerdote (La Sacre Bibbia 2008)

(35) Sur terre Jésus ne **serait** même pas prêtre (Bible des Peuples 2011)

Thus, these examples not only provide evidence for the diachronic extensions of specific forms from stage 1 to stage 2 of the counterfactual life cycle, but also show the role played by the synchronic layering of counterfactual strategies within the counterfactual system. In fact, the latter point can be supported even further by the fact that other translations which are less close to spoken registers, such as the Reina Valera Spanish translation, use older forms, such as the so-called 'imperfect' subjunctive in *-se* (developed out of the Latin pluperfect subjunctive, see Penny 2007, 168), as shown in 36 below.

(36) Así que, si **estuviese** sobre la tierra , ni siquiera sería sacerdote. (Biblia Reina Valera 1960)

In other words, the more spoken-like character of the other translation (cf. 'para todos') correlates with the use of more innovative forms of counterfactuals. This suggestion is also corroborated by a recent study which has shown that in spoken language Italian speakers use the innovative imperfect indicative (Mauri, Barotto, and Mattiola 2023).

Third and finally, the evidence from modern Romance language translations suggest that modals too play a role in the changes to counterfactual system, though for different diachronic reasons. First of all, there are specialized counterfactual constructions which have come to use epistemic modal verbs express the counterfactuality. In the Latin version of 2Cor 11:1 there is a counterfactual insubordinate wish construction (cf. la Roi 2022a, 35–40), as there is an insubordinate wish construction in Italian with *se* 'if' (cf. Counterfactual wishes in English with 'if only' and in French with 'si (seulement')). The difference between the two is that the Italian has used a counterfactual modal verb instead, a strategy which we see in Germanic languages as well (cf. D'Hertefelt 2018, 34 and English "if only he would/could have X").

(37) **Utinam sustineretis** modicum quid insipienti me (2Cor 11:1)
(38) Oh **se poteste sopportare** un po' di follia da parte mia ! (La Sacre Bibbia 2008)

The other languages have paraphrases here which do not accurately reflect the source text, e.g. "me gustaría ...", but other translations in the same language do have similar counterfactual structures, as in example 39 from French.

(39) **Si seulement vous pouviez supporter** de ma part un peu de déraison . . . mais vous me supportez bien ! (Nouvelle bible segond 2002)

Thus, epistemic modal verbs may be one of the strategies recruited for the place of counterfactual moods, for which evidence can be provided from examples where Latin did not have an epistemic modal verb, as above.

Second, there are instances where translations use a modal verb in a counterfactual way but written language contact likely plays a role; as shown in 40, the Latin uses the modal verb *poterat* counterfactually here, partially as the result of the fact that the Greek too has a counterfactual use of a modal verb here (viz. ἐδύνατο "he could have", see la Roi forthca) and partially because *poterat* had already developed counterfactual usages before the Postclassical Latin period. In the Romance languages we similarly find a form of this modal verb, but, crucially, in the form which the replacement of the inherited mood had taken, viz. *hubiera podido*, *poteva* and *pouvait*.

(40) Agrippa autem Festo dixit : Dimitti **poterat** homo hic, si non **appellasset** Caesarem. (Acts 26: 32)
(41) Y Agripa le dijo a Festo : — Este hombre **hubiera podido quedar** en libertad si no **hubiera apelado** al emperador (La Biblia: La Palabra de Dios para Todos 2005)
(42) Agrippa disse a Festo : « Quest'uomo **poteva essere liberato** , se non si **fosse appellato** a Cesare » . (La Sacre Bibbia 2008)
(43) Agrippa dit à Festus : S'il n'en **avait** pas **appelé** à César, on **pouvait** le **mettre** en liberté . (Bible des Peuples 2011)

Moreover, a parallel instance from the New Testament which refers to the non-past shows that this strategy must have been available for stage 2 counterfactuality as well.

(44) nisi esset hic a Deo, **non poterat** facere quidquam (John 9:33)
(45) Si este hombre no viniera de Dios, no **hubiera podido** hacer nada (La Biblia: La Palabra de Dios para Todos 2005)
(46) Se quest'uomo non fosse da Dio , non **potrebbe** fare nulla » . (La Sacre Bibbia 2008)
(47) Cet homme ne **pourrait** rien faire s'il ne venait pas de Dieu . " (Bible des Peuples 2011)

Third, there are modal verbs which do not belong to the epistemic realm, but to the deontic realm and in the modern Romance languages are also expressed in the form of the replacements; in the examples below we can observe that the counterfactual modal verb in the Latin was expressed by the replacement forms of modal verbs in modern Romance languages as well, such as the conditional mood in Spanish and Italian (49 and 50), whereas French uses a paraphrase in the imperfect indicative.

(48)Quidam autem ex Asia Judi , quos **oportebat** apud te praesto esse, et accusare si quid haberent adversum me (Acts 24:19)

(49) Algunos judíos de Asia estaban allí . Son ellos son los que **deberían** estar aquí acusándome , si es que tienen algo en mi contra (La Biblia: La Palabra de Dios para Todos 2005)

(50) e vi erano alcuni Giudei dell'Asia ; questi **avrebbero dovuto** comparire davanti a te e accusarmi , se avevano qualcosa contro di me . (La Sacre Bibbia 2008)

(51) il y a eu seulement ces Juifs d'Asie : **ils auraient bien** dû venir et m'accuser s'ils avaient quelque chose à me reprocher ! (Bible des Peuples 2011)

To summarize, this brief diachronic survey has shown that the counterfactual strategies from Latin undergo a long and complex history of change into the modern Romance languages. The evidence from modern New Testament translations from Romance languages has shown that (i) the Romance languages differ in the replacements of the inherited counterfactual subjunctive from Latin, replacing

either with different past indicative forms or a conditional mood, (ii) the histories of counterfactuals in the Romance languages contrast in the speed with which they have replaced older strategies, resulting in the synchronic layering of counterfactual strategies of different ages in the evidence from New Testament translations, and (iii) the Romance languages have also come to use modal verbs to replace inherited strategies, both in epistemic and deontic environments.

6 Conclusions

In this paper, I have demonstrated that the evidence from Latin to Romance harbours a rich, yet typically overlooked source of evidence for the life cycles of counterfactual moods and modal verbs. In Archaic Latin, the counterfactual optative inherited from Proto-Indo-European had been syncretized in what is commonly called the subjunctive. As a result, we find a complex system of different temporal-aspectual options with which counterfactuality can be expressed in the past as well as in the non-past as a result of their counterfactual life cycles. The comparison of counterfactual constructions from Archaic to Classical Latin shows important signs of stability in the counterfactual system (cf. the role of the imperfect subjunctive) as well as signs of innovation, particularly in the form of novel counterfactual life cycles of modal verbs or the past indicative replacements of the inherited subjunctive. Whereas previous accounts have primarily emphasized changes to the counterfactual subjunctive between these periods, I have sought to recalibrate these statements, for example by pointing to the large degree of stage 1 as well as stage 2 counterfactuality for the different subjunctive forms (e.g. present, imperfect and pluperfect) in both periods, not only in conditionals but also in specialized wish constructions.

At the same time, there were relevant signs of novel counterfactual life cycles in the history of Latin, such as (i) the novel life cycle of the past indicative in Classical Latin as a competitor to the subjunctive, (ii) novel life cycles of modal verbs of different types of modality from Archaic to Classical Latin of which imperfect(ive) forms developed into stage 2 and, in the case of *debebat* even stage 3 of the counterfactual life cycle. The speed with which such novel counterfactual constructions developed in the history of Latin depended on an interplay between the temporal-aspectual form of the counterfactual (e.g. imperfect(ive) forms progressing fast) and language ecological factors, such as the presence of alternative strategies in the synchronic system (cf. the synchronic layering of the dominant inherited subjunctive with the rare innovative indicative replacer in Classical Latin). Moreover, the comparison with Postclassical Latin and the modern Romance languages revealed that these counterfactual life cycles may not only take a long time (cf. the use of the counterfactual subjunctive in Italian), but also that the counterfactual system can continue to be made up of counterfactual moods as well as modal verbs. In Postclassical Latin, the seeds for the conditional moods which come to replace the counterfactual subjunctive in modern Romance languages such as Italian and Spanish were planted, but the comparative investigation of New Testament translations showed that a one-to-one replacement of the subjunctive with one other strategy did not happen in any Romance languages. Instead, the evidence from the New Testament translations into Spanish, Italian and French confirmed a synchronic layering of different counterfactual strategies of various ages (e.g. the inherited subjunctive versus the conditional mood in Italian or the 'pluperfect' indicative versus the conditional mood in Spanish). Moreover, contrastive evidence of modern translations from different registers corroborated the role played by register in the degree of innovative usage of counterfactuals. Modal verbs too play a role in the counterfactual system in modern Romance languages. In the evidence from the modern New Testament translations they may occur as the result of written language contact with a modal verb form in the original(s), but they may also occur as a sign of the role played by modal verbs in the counterfactual system (e.g. modal verbs in specialized counterfactual insubordinate wishes).

References

Adams, J.N. 2011. *Social Variation and the Latin Language*. Oxford: Oxford University Press.

Aerts, S. forthc. *Dormivit et resurgit*. A language-ecology approach to the diachrony of the Latin ingressive perfect. *Journal of Latin Linguistics.*

Allan, R. J. 2013. "Exploring Modality's Semantic Space: Grammaticalization, Subjectification and the Case of Ὀφείλω." *Glotta* 89: 1–46.

Blase, H. 1888. *Geschichte Des Irrealis Im Lateinischen: Zugleich Ein Beitrag Zur Kenntnis Des Afrikanischen Lateins*. Erlangen: A. Diechert.

Clackson, J., and G. C. Horrocks. 2007. *The Blackwell History of the Latin Language*. Malden: Wiley-Blackwell.

Dahl, Ö. 1997. "The Relation between Past Time Reference and Counterfactuality: A New Look." In *On Conditionals Again*, edited by A. Athanasiadou and R. Dirven, 97–114. Amsterdam: Benjamins.

D'Hertefelt, S. 2018. *Insubordination in Germanic : A Typology of Complement and Conditional Constructions*. Berlin: De Gruyter.

Evans, N. 2007. "Insubordination and Its Uses." In *Finiteness: Theoretical and Empirical Foundations*, edited by I. Nikolaeva, 366–431. New York: Oxford University Press.

Fleischman, S. 1995. "Imperfective and Irrealis." *Modality in Grammar and Discourse*, 519–51.

Gildersleeve, Basil L., and Gonzalez Lodge. 1895. *Gildersleeve's Latin Grammar*. 3rd. ed. Revised and Enlarged. London: London : MacMillan and Co, 1895.

Haiman, John, and Tania Kuteva. 2002. "The Symmetry of Counterfactuals." In *Complex Sentences in Grammar and Discourse*, edited by Joan L. Bybee and Michael Noonan, 101–24. Amsterdam: John Benjamins Publishing Company.

Handford, S. A. 1947. *The Latin Subjunctive : Its Usage and Development from Plautus to Tacitus*. London: Methuen.

Haverling, G. V.M. 2013. "On Tense and Mood in Conditional Clauses from Early to Late Latin." In *Studies in Language Companion Series*, edited by Folke Josephson and Ingmar Söhrman, 134:13–56. Amsterdam: John Benjamins Publishing Company.

Haverling, G.V.M. 2010. "Actionality, Tense, and Viewpoint." *New Perspectives on Historical Latin Syntax* 2: 277–523.

Hofmann, J. B., and A. Szantyr. 1965. *Lateinische Syntax Und Stilistik*. München: Beck.

Hopper, P. J. 1991. "On Some Principles of Grammaticization." In *Typological Studies in Language*, edited by Elizabeth Closs Traugott and Bernd Heine, 19:1:17–36. Amsterdam: John Benjamins Publishing Company.

Iatridou, S. 2000. "The Grammatical Ingredients of Counterfactuality." *Linguistic Inquiry* 31 (2): 231–70.

James, D. 1982. "Past Tense and the Hypothetical a Cross-Linguistic Study." *Studies in Language* 6 (3): 375–403.

Jespersen, Otto. 1925. *The Philosophy of Grammar*. Repr. London : Allen and Unwin.

Kühner, Raphael, and Carl Stegmann. 1912. *Ausführliche Grammatik Der Lateinischen Sprache*. Vol. 1. Hannover : Hahn.

Kuteva, Tania, Bas Aarts, Gergana Popova, and Anvita Abbi. 2019. "The Grammar of 'Non-Realization.'" *Studies in Language* 43 (4): 850–95.

la Roi, E. 2021. "The Insubordination of If- and That-Clauses from Archaic to Post-Classical Greek: A Diachronic Constructional Typology." *Symbolae Osloenses*, 2–64.

———. 2022a. "Insubordination in Archaic and Classical Latin: Commands, Requests, Wishes and Assertives." *Journal of Latin Linguistics* 21 (1): 23–45.

———. 2022b. “Interlocked Life-Cycles of Counterfactual Mood from Archaic to Classical Greek: Aspect, Actionality and Changing Temporal Reference.” *Indogermanische Forschungen* 127: 235–82.
———. 2023. “Polarity Reversal Constructions and Counterfactuals in Ancient Greek: Between Implicature and Conventionalization.” *Journal of Historical Linguistics*, March.
———. 2024a. “The Life Cycles of Counterfactual Modal Verbs in Ancient Greek: Temporal Reference Shift, Language Ecology and Analogy.” *Classical Philology* 119 (4), 502-527.
———. 2024b. “The Life Cycles of Counterfactual Mood in Early Indo-European Languages: The Inherited Counterfactual Optative and Its Replacements through Time.” *Indogermanische Forschungen* 129, 241-280.
———. forthca. “Dangling between Diachrony, Register and Atticism: A Language Ecology Approach to Modal Morphosyntax in Post-Classical Greek.” In *Advances in Ancient Greek Linguistics. Proceedings of the 10th International Conference on Ancient Greek Linguistics*, edited by J. De la Villa, A. Striano, and R. Verano Liaño. Berlin; Boston: De Gruyter.
———. forthcb. “The Counterfactual Life Cycle: Cyclicity, Pragmatics and Modality.” In *Cyclicity in Grammar and Discourse*, edited by Maj-Britt Mosegaard Hansen and Richard Waltereit. Oxford ; New York: Oxford University Press.
Magni, Elisabetta. 2010. Mood and Modality. In *New Perspectives on Historical Latin Syntax: Constituent Syntax: Adverbial Phrases, Adverbs, Mood, Tense* ed. by Baldi Philip & Pierluigi Cuzzolin, 193-275. Berlin, New York: Mouton de Gruyter.
Mauri, Caterina, Alessandra Barotto, and Simone Mattiola. 2023. “Counterfactual Conditionals: Linguistic Variation in Italian and Beyond.” In *Sociolinguistic and Typological Perspectives on Language Variation*, edited by Silvia Ballarè and Guglielmo Inglese, 155–96. Berlin; Boston: De Gruyter Mouton.
Melo, Wolfgang David Cirilo de. 2007. *The Early Latin Verb System: Archaic Forms in Plautus, Terence, and Beyond*. Oxford ; New York: Oxford University Press.
Mesa Sanz, Juan Francisco. 1998. *El Deseo y El Subjuntivo : Análisis de Los Actos de Habla y El Valor Optativo En Lengua Latina*. Alicante: Publicaciones de la Universidad de Alicante.
Molencki, R. 1999. *A History of English Counterfactuals*. Katowice: Prace naukowe Uniwersytetu Śląskiego w Katowicach.
Narrog, Heiko, and Bernd Heine. 2021. *Grammaticalization*. First edition. Oxford Textbooks in Linguistics. Oxford, United Kingdom ; New York, NY: Oxford University Press.
Olguín Martínez, Jesús, and Nicholas Lester. 2022. “A Quantitative Analysis of Counterfactual Conditionals in Cross-Linguistic Perspective.” *Italian Journal of Linguistics* 33 (2): 147–82.
Patard, Adeline. 2020. “A Counterfactual Cycle. Evidence from the French Imperfect.” Brussels.
Penny, Ralph J. 2007. *A History of the Spanish Language*. 2. ed., Repr. Cambridge: Cambridge Univ. Press.
Pinkster, Harm. 2015. *Oxford Latin Syntax. : Volume 1: The Simple Clause*. Oxford: Oxford University Press.
Prince, Kilu von. 2019. “Counterfactuality and Past.” *Linguistics and Philosophy* 42 (6): 577–615.
Ruiz Yamuza, Emilia. 2021. “Past Tenses of Modal Verbs: ῎Εδει and (ἐ)Χρῆν in Attic Tragedy and Comedy.” In *Synchrony and Diachrony of Ancient Greek*, edited by Georgios K. Giannakis, Luz Conti, Jesús de la Villa, and Raquel Fornieles, 279–90. Berlin, Boston: De Gruyter.
Sabaneeva, Margarita Konstantinova. 1996. *Essai Sur l’évolution Du Subjonctif Latin : Problèmes de La Modalité Verbale / M. Sabanééva.* Louvain: Peeters.
Steele, S. 1975. “Past and Irrealis: Just What Does It All Mean?” *International Journal of American Linguistics* 41 (3): 200-217.

Thomas, François. 1938. *Recherches Sur Le Subjonctif Latin : Histoire et Valeur Des Formes*. Paris: Klincksieck.

Van linden, An, and Jean-Christophe Verstraete. 2008. "The Nature and Origins of Counterfactuality in Simple Clauses." *Journal of Pragmatics* 40 (11): 1865–95.

Van Olmen, Daniël. 2018. "Reproachatives and Imperatives." *Linguistics* 56 (1): 115–62.

Weber, R., and R. Gryson. 2008. *Biblia Sacra Vulgata. Editio Quinta*. Stuttgart: Deutsche Bibelgesellschaft.

Yong, Qian. 2018. "Pathways of Counterfactual Markings: A Diachronic Typology." *International Journal of English Linguistics* 8 (2): 180–198.