The Origin of the Italic Imperfect Subjunctive

The six tenses of Classical Latin form a symmetrical pattern, with the three-way temporal contrast of the *infectum*, or present system, replicated in the *perfectum*, or perfect system:1)

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<tr>
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<th>Present</th>
<th>Future</th>
<th>Past</th>
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</thead>
<tbody>
<tr>
<td>Infectum</td>
<td>tangis (pres.)</td>
<td>tangēs (fut.)</td>
<td>tangēbas (impf.)</td>
</tr>
<tr>
<td>Perfectum</td>
<td>tetigistis (perf.)</td>
<td>tetigeris (fut. perf.)</td>
<td>tetigerās (plupf.)</td>
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The neatness of this array is slightly disturbed by the fact that the perfect is frequently employed as a simple preterite (you touched) rather than as a resultative present. This function, however, is confined to the indicative. In the subjunctive, where the present:future contrast is neutralized and the six fundamental tenses are reduced to four, the perfect subjunctive serves simply as the non-past subjunctive of the perfect series:

<table>
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<tr>
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<th>Non-Past</th>
<th>Past</th>
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<tbody>
<tr>
<td>Infectum</td>
<td>tangēs (present subj.)</td>
<td>tangerēs (imperfect subj.)</td>
</tr>
<tr>
<td>Perfectum</td>
<td>tetigerēs (perfect subj.)</td>
<td>tetigēsēs (pluperfect subj.)</td>
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An almost identical system is found in Oscan and Umbrian, where the absence of attested pluperfect forms may be accidental. We may thus speak of an “Italic” verbal system, distinguished from the system reconstructible for Proto-Indo-European by the following innovations:2)

1) Here and below, Latin temporal and modal categories will usually be cited in the 2 sg., which preserves the structure of the preceding stem more clearly than the 1 sg. or 3 sg.

2) The term “(Proto-)Italic” will be used here to refer to the later stages of the protolanguage ancestral to Latin (with Faliscan) and the dialects of the Oscan-Umbrian group (Oscan, Umbrian, Marrucinian, Paelignian, Vestinian, etc.). We are not yet in a position to draw meaningful conclusions about such Italic languages as Venetic, Sicel or South Picene.

1) the creation of a morphologically distinct future, replacing the desiderative presents and modal forms that served to express futurity in the parent language;

2) the functional merger of the PIE aorist and perfect into a single tense, the “perfect,” with the value of both a simple preterite, functionally continuing the old aorist, and a resultative present, continuing the old perfect;

3) the introduction of a resultative future (the future perfect) and a resultative present (the pluperfect), serving as perfect system counterparts to the non-present tenses of the *infectum*;

4) the elimination of the PIE subjunctive: optative contrast and the establishment of a single subordinate mood, the “subjunctive”;

5) the introduction of an opposition between past (imperfect, pluperfect) and non-past (present, perfect) subjunctives, partly duplicating the tense system of the indicative.

Developments 1)-3) are well understood. Proto-Italic had two future formations, one based on the PIE subjunctive in *-e/o/- (cf. Lat. eris < *es-za-e-si, tangēs < *tange-e-si, amābis < amā + -bis < *bhuh-e-si), and the other a specialization of the PIE desiderative in *-(h)ē-si (cf. Osc. 3 sg. deiuast ‘will swear’, OLat. fāxō, -is ‘will do’, amāssō, -is ‘will love’ (with secondarily geminated -ss-).3) There were also, as in the closely related Celtic languages, two groups of perfect stems, one deriving from the PIE perfect proper (Lat. tetigē, -istī < *tetag-, Osc. fēfak- (: fāk- ‘do’), and the other from the PIE aorist (cf. Lat. dīxī, -istī; uēnī, -istī, Osc. 3 sg. kumbened ‘conuenit’).4) The most distinctive innovation of Proto-Italic, the expansion of the perfect system, probably had its starting point in the creation of the future perfect. As I have tried to show elsewhere (Jasanoff 1987), this tense was originally an s-future built to the perfect stem: forms like Lat. tetigerēs (< *tetagēsēs-) and Osc. fut. pf. 3 sg. fēfakṣtis go back to earlier *tetag-s- and *fēfak-s-, respectively, with *-s- secondarily re-

3) The immediate affinities of the Latin fāxō- and amāssō-types are thus with the s-futures of Celtic, Greek, Indo-Iranian, and Balto-Slavic, and not with the PIE s-aorist. The Italic s-future was originally athematic, with fixed root accent and *ē : *ē ablaut (cf. Jasanoff 1988: 233ff.). It is impossible to tell whether fāxō, -is, etc. represents a purely mechanical thematization of earlier *fakṣmi, *-si, or the inherited subjunctive of such a present.

4) A survey of the Latin perfect stem types is given by Leumann (1977: 585 ff.).
placed by *-is- in Latin and by *-us- in Osco-Umbrian. 9) The Latin pluperfect is an analogical pendant to the future perfect, made by substituting the synchronic preterite marker *-ā- for *-e/o- on the model of the future; imperfect pairs erō, is: eram, -ās and -bō, -bi:, -bās, -bēs.

The prehistory of the Italic subjunctive is more complicated. To the extent that the attested forms have clear etymologies at all, they go back not to PIE subjunctives, which yielded futures, but to PIE optatives. The most archaic modal forms in Latin add the optative sign *-ēh,- / *-ihe- directly to an athematic present stem, as in OLat. siem, -ēs, 1 pl. siēmus, and nelīm, -ēs, edīm, -ēs. The same formation underlies the obsolescent present subjunctives of the type faxīm, -ēs and amatīm, -ēs, properly optatives corresponding to the desiderative presents (> futures) faxō and amatō. The faxīm-type has an analogue in the perfect system, where the perfect subjunctive tetigērō, -ēs (< *tetagīsēs) stands in the same relation to the future perfect tetigērēs, -ēs as faxīm and amatīm to faxō and amatō. 9) Conspicuously absent in Italic is any trace of the PIE "thematic" optative in *-oi- (i.e., *-o- + -ihe-). The thematic presents of the second, third, and fourth conjugations form their subjunctives with the mood sign

9) The *-u- of Osco-Umbrian *-u- is ultimately due to the influence of the verb *jīl- "be (come)" which historically formed a future perfect *jēfl̠st < *jēf̠iś (cf. Umbr. 3 pl. jēf̠īne) and a perfect *jēfed < *jēf̠o- (cf. Buck 1928: 173, 362 and already Brugmann 1880: 40). The more problematic *-i- of Lat. *-is- seems originally to have been a union vowel, imported into the future perfect from the perfect indicative (cf. dixiṣtī < *deiks-i-stai, dīximus < *deiks-i-mos, etc.). The source of *-i- in the indicative is perhaps to be sought in the u-perfects of long-vowel roots, where Proto-Italic inherited 1 sg. and 3 sg. forms in *-ēy from late PIE (cf. Ved. tashāṁ "stands", etc.). When the perfect endings were extended by the hic et nunc particle *-i- in pre-Latin (cf. tetīg < *-a-i, tetīgēr < *-e-i[r], tetigērē < *-e-r-i), the paradigm of the nascent u-perfects would have become

1 sg. *gnōy, *sēy, *strāy
2 sg. *gnōstai, *sēstai, *strāstai
1 pl. *gnōmos, *sēmos, *strāmos, etc.

The morphologically opaque *i- element was subsequently extended to the other persons and numbers, giving rise to *sēgīstai, *sēgimōs, etc. The final step was the analogical replacement of *-i- by *-uai in the 1 sg. and *-uei[r] in the 3 sg., leaving *-i- "stranded" as a union vowel in the 2 sg., 1 pl., and 2 pl.

6) Note that the absence of a reflex of *-ē- in nelīm, -ēs and edīm, -ēs is not due to analogical leveling, but reflects the fixed root accent of these forms, which took the zero grade of the optative suffix in the singular as well as the plural (cf. Narten 1968). Since fixed root accent was also a feature of the athematic s-presents (cf. note 3), the types faxīm, -ēs and tetigērō, -ēs have invariant *-ē- as well.

-ā-, an element common to Italic and Celtic (cf. Lat. tangās, Osc. dicant, OIr. bēra "ferat"). 7) The first conjugation present subjunctives in *-ē- (< *-aμη- or *-aμē-; cf. Lat. amēs, Osc. deivitād "nuret", Umbr. portaia "portet") are more problematic: their source is probably to be sought in the small minority of first conjugation verbs which go back to athematic presents in *-ā- (*-eh₂- or *-ā- (*-h₂-) with optatives in *-ihe- / *-ihe-. A derivation from the PIE "long vowel" subjunctive in *-āē- (i.e., *-eh₂je-e/o-), though favored in the older literature, is unlikely on functional grounds.)

By far the most puzzling innovation of the pre-Italic period—and the only one that will concern us here—was the creation of the distinctive "past" subjunctives of the type tangerēs (impf. subj.) and tētigēsēs (plpf. subj.). The use of the imperfect and pluperfect subjunctive in Latin, and apparently also in Oscan and Umbrian, is in large part regulated by the rule of "Sequence of Tenses" (ST), which governs the succession of tense markings in complex sentences. The effect of the rule is very simple: in certain common types of subordinate clauses that require the subjunctive, a past subjunctive appears if and only if a past tense appears in the corresponding main clause. So, e.g., in indirect questions:

1) nesciō quid faciās (pres. subj.) / fēcērīs (perf. subj.)
   "I don't know what you are doing / have done"

but

2) nesciēbam quid facerēs (impf. subj.) / fēcēssēs (plpf. subj.)
   "I didn't know what you were doing / had done"

7) Cf. Jasanoff (1983: 75 ff.), where it is suggested that tangās, dicās, etc., and their C.tic counterparts, along with the imperfects erās (MW 3 sg. oed = "was") and -bās (OIr. 3 sg. ba = "was") originated as preterites in *-h₂- to inherited subjunctives—often aorist subjunctives—in *-e/o-. The ā-optative was primitively independent of the present stem; traces of this state of affairs can still be seen in forms like OLat. attigās and adunēs for classical attingās, adunēs. A distant connection with the "ā-preterites" of Tocharian and Balto-Slavic is likely.

8) Here and below, I write *-āē- rather than the usual *-ē- for the Proto-Italic forms because it is unclear whether the inherited nucleus of the type was provided by verbs like renouāre, with presents in invariant *-ā- and optatives in original *-āē- < *-eh₂jēh₁ (cf. Hitt. newahh < "make new"), or by verbs like inclināre, with presents in *-a(n)ā- / *-a(n)ū- and optatives in earlier *-a(n)āē- < *-a(n)h₂jēh₂-. The great mass of first conjugation presents, of course, had presents in *-āē-o- (*-eh₂jē-e/o-) and "optatives" in *-āē- (i.e., *-eh₂jē-e/o-); modal forms of this kind are still normal in Celtic (cf. OIr. glāna "purge, purget"), but have been eliminated from Italian, presumably owing to their near homophony with the indicative. Umbrian -aia- shows the addition of the productive subjunctive sign *-ā- to the phonological reflex of *-āē- (cf. Buck 1928: 174).
And in purpose clauses:
3) *ēs ut uinās (pres. subj.)
   ‘You eat that you may live’ (= ‘You eat to live’)
but
4) edēbās ut uinerēs (imperf. subj.)
   ‘You were eating (that) you might live’ (= ‘You were eating to live’)

ST is thus in essence an agreement rule which copies the value of the feature [+past] from the verb in a matrix sentence to the verb in an embedded sentence. Agreement marking of this kind is very common in modern European languages, including English, where the contrast between sentences like “I don’t know what you are doing” and “I didn’t know what you were doing,” as in the above glosses, is as much a part of the language as the contrast between *faciās and *facerēs in Latin. (English, of course, uses the indicative or a modal auxiliary in such cases.) Among the older IE languages, Attic Greek employs the subjunctive in a variety of subordinate clauses after a present or future, but uses the optative after an imperfect or aorist, thus duplicating the effect of ST with a rule of “Sequence of Moods.” A case can be made for positing such a rule, with the optative serving as the “past” of the subjunctive in certain contexts, in the parent language.

In Italic, where the PIE optative (or its successor category, the *-subjunctive) was prehistorically substituted for the old subjunctive in all its modal functions, the contrast between [+past] and [-past] in subordinate clauses is necessarily expressed by different means. The mark of the past subjunctive in Latin and Oscan-Umbrian is a suffix reconstructible as *-sē-, which is added to present stems to form the imperfect subjunctive, and (in Latin at least) to perfect stems to form the pluperfect subjunctive. Since the overwhelming majority of present stems end in a vowel, the typical outcome in Latin is -rē- in the imperfect subjunctive, with regular rhotacism of intervocalic *-s- to -r- (cf. *tangērēs, *facerēs, *amārēs, etc.). Unrhotacized -sē- is preserved after *s- in the verb ‘to be’ (imperf. subj. essēs, etc.; pres. stem esse), and assimilates to preceding -l- in the verb ‘to want’ (imperf. subj. *welleī, etc.; pres. stem *welē). In Oscan, where there was no phonological

course, to the accident that the Latin infinitive goes back historically to the loc. sg. in *-i of an s-stem verbal noun.

8) The descriptive rule that the imperfect subjunctive is made by adding personal endings to the present infinitive (cf. tangere, facere, esse, welle) is due, of course, to the accident that the Latin infinitive goes back historically to the loc. sg. in *-i of an s-stem verbal noun.

9) In Oscan intervocalic *-s- was voiced to -z-, but the change is not represented in the native writing system.

10) In the discussion that follows, the term “imperfect subjunctive” is in part simply an abbreviation for the more unwieldy “imperfect and pluperfect subjunctive.” But the form of the pluperfect subjunctive in Latin, which presupposes a reanalyzed perfect stem *tetagisē, makes it likely that the imperfect subjunctive is in fact the more archaic of the two categories.

11) Buck (op. cit., 301) glosses the e-subjunctive of the s-aorist as “a future of the past, which is a rational basis for the actual uses of the tense.” He cites no typological parallels; one suspects that he has confused “future of the past” with the much more usual “past of the future” (see below).
yielded Latin forms of the type *tangeris rather than the attested tangerēs. Such “short vowel” subjunctives of the s-aorist are well attested in Homeric Greek and Vedic Sanskrit; it is hard to see why they should have been replaced by forms in *-ē-, proper only to thematic stems, in Italic.

The natural alternative is to consider the possibility of a connection between the *-ē- of *-sē- and the PIE optative suffix *-jē-.*-ē-. Here too the initial signs are discouraging. As can be seen from forms like the Latin pronominal genitive eius < *esjo + -s, the sequence *-sjē- was not regularly simplified to *-s- in Italic. In principle, the combination *-s- + *-ē- could also have come about analogically, through the secondary extension of *-ē- to the s-aorist from a category such as the subjunctive type amēs, where *-jē- had become *-ē- by regular sound change. But it is not at all clear why the formally and functionally remote amēs-type should have induced the nascent imperfect subjunctives in *-sjē- (*amāsjē-, *faksiē, etc.) to give up their *-jē-. An altogether different reconstruction of the optative suffix is therefore favored by Hirt (1915: 140ff.), who cites the Greek s-aorist optatives in 3 sg. -sē, pl. -sēan (type deixeis (pres. deixnikoi)) and the Old Prussian “optatives” in -sei (e.g., boisi ‘would be’ (Osc. fusid, Lat. frit?) to argue for a special PIE s-aorist type in *-s-ēi-. In Italic the combination of *-s-ēi- with the endings of the 1 sg. and 3 pl. would have yielded preforms in *s-ēj-m and *s-ēj-pi; these, in Hirt’s view, developed via *-sejém and *-sejent to *-sēm and *-sēnt, from which *-sē- was analogically extended to the other persons and numbers. Neither the Baltic nor the Greek comparison, however, can any longer be upheld. It is now clear that Gk. -sēe rests on older -sē, which is found in Cretan dialect inscriptions; OPr. -sei is a development of the s-future rather than of the s-aorist, which is unattested in Baltic.13 In a careful study of the relevant Indo-Iranian evidence, Hoffmann has pointed out (1968: 246, fn. 4; cf. below) that there was probably no s-aorist optative in the parent language at all.14

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13) The critical Greek forms are the optatives kosmēsē and dikakesē, which show that the -ēi- of the classical (“Aeolic”) type deixeis is an inner-Greek creation (cf. Rix 1976: 232f.). On the Prussian forms cf. Stang (1966: 442f.).

14) Verbs with s-aorist indicatives and subjunctives originally built their aorist optatives directly from the unsigmatized root; cf. Ved. aor. indic. yau-, or. subi yosa-, but aor. opt. yau- (*yau- ‘ward off’). The absence of inherited forms in *-sjē- makes it unproductive to speculate on the possibility of an ad hoc Italic phonological rule that simplified *-sjē- to *-s- after stops.

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According to an isolated suggestion by Safarewicz (1952: 103ff.), the imperfect subjunctive was originally the “-ē-preterite” of an s-aorist indicative. But even if it could be shown—and it cannot—that Italic once had a preterite suffix *-ē-, the semantic basis for Safarewicz’ proposal would remain unintelligible.15

The other possible source of the *-s- of *-sē- is the *-s- of the PIE desiderative/future. A priori, a connection of the imperfect subjunctive with the Italic s-future (Lat. faxis, Osc. deiustau) would seem at least as attractive as a connection with the s-perfect. “Desiderative” *-s- was highly productive in Italic, where it gave rise to a whole new tense, the future perfect; the s-perfect (< aorist), by contrast, is limited in its distribution in Latin and is not found at all in Osco-Umbrian. Morphological links between futures and modal forms are typologically very common; familiar examples from modern languages include the English pair will: would and the Romance future and conditional in -r- (cf. Fr. chanter ‘will sing’: chanterait ‘would sing’, etc.).16 Yet the prospects for explaining the imperfect subjunctive as a subjunctive or optative of the desiderative are poor. The possibility of a long vowel subjunctive in *-s-sē- can be dismissed out of hand: since *-s- and *-ē- each imparted future meaning separately, it is inconceivable that they could have yielded anything but a future when used together. A desiderative optative in *-s-jē- *-s-ī-, analogically transformed to eliminate the *-jē-, would make better sense from a functional point of view. But the optative of the desiderative is already attested in the Latin type faxis, amāsis, etc., and these are present, not imperfect subjunctives. Cowgill (1973: 292, fn. 41) makes a valiant attempt to keep the desiderative possibility alive by taking *-sē- as the synchronic subjunctive in -ē- (cf. amēs) of a present in *-sā-. Under this analysis, Lat. forēs would represent the present subjunctive of a lost first conjugation indicative *forēs ‘you wish to be’. Cowgill’s proposal, however, is too contrived to be convincing, and it is badly compromised by the fact that the 3 sg. subjunctive of
an Italic present *fusā- would have appeared as *fusaid, not fusid, in Oscan.17

To summarize, the problem of the origin of the imperfect subjunctive has not responded well to what might be called the "combinatory" approach—the technique of decomposing a complex morpheme (here *-sē-) into its presumed constituents (here *-s- and *-ē-) and attempting to etymologize these separately. Ordinarily the method is quite successful. The handbooks of Latin, and of every other IE language, offer countless examples of suffixes whose history is basically revealed by the judicious insertion of a hyphen: the -bā- of the Latin imperfect can be analyzed as -b-a-, the preterite in -ā- of the auxiliary -b- < *-bhy- 'be'; the adjectival suffix -ānus is etymologically -ā-nus, the sequence that arose from the addition of *-no- to ā-stem nouns; and so on. In the case of the imperfect subjunctive it is not the segmentation *-s-ē- that raises problems, but the next step—the identification of the elements *-s- and *-ē- with recognizable PIE morphemes. The first term is in all likelihood the marker of the aorist or desiderative, but neither alternative is obviously preferable to the other; the second is presumably a mood sign. But the Italic treatment of the IE moods is so confused that no clear choice can be made between the subjunctive (formally straightforward, functionally difficult) and the optative (functionally straightforward, formally difficult). None of the four possible combinations yield the required composite meaning—past subjunctive—in any simple way.

The problem, however, can be viewed in a completely different light. Past attempts to explain the imperfect subjunctive have typically proposed one or another identification of the *-s- and *-ē- and suggested ways—or left it to the reader to imagine ways—that the combination *-s-ē- could have acquired the functions associated with *-sē- in the attested languages. As we shall see, there are advantages to be gained from a less PIE-centered, more "synchronic" approach—one that focuses on the state of the Proto-Italic system at the critical moment when the need for tense marking in the subjunctive was first recognized and addressed by native speakers. The parent language, as we know, had two subordinate moods, which, to judge from the Greek Sequence of Moods rule, may originally have been used in ways that approximated the use of the present and past subjunctives in Latin. But the PIE situation was transformed in Italic, where the subjunctive became a future, and the only modal category that remained, other than the imperative, was the optative. Thus, there must have been a period in the evolution of Proto-Italic when there was no formal distinction between the two "subjunctives" (= optatives) in sentences like

5) *ne skiō k*īd fakiās / faksiās
   (= Lat. nesciō quid faciās (pres. subj.))
   'I don't know what you are doing'

and

6) *ne skiēbām k*īd fakiās / faksiās
   (= Lat. nesciēbam quid *faciās (for impf. subj. facerēs))
   'I didn't know what you were doing'.18

It is against the background of the grammar that produced sentences 5) and 6)—a grammar with no contrast between present and past subjunctives, and therefore also with no ST rule—that the substitution of the new imperfect subjunctive *fakīsēs (> Lat. facerēs) for *fakiās / faksiās in 6) must be understood.

That the speakers of Proto-Italic would have found it expedient to attach the feature [+past] to an embedded verb in "secondary sequence" (i.e., after a [+past] main verb) is not surprising, given the cross-linguistic frequency of interclausal tense agreement rules. Other IE languages which have lost the subjunctive: optative opposition have similarly introduced a distinction between past and nonpast varieties of a single subordinate mood, among them Celtic and Germanic, the immediate neighbors of Italic to the west and north. In these languages the origin of the forms that function as past subjunctives is clear. The Insular Celtic languages make their past subjunctive by adding the endings of the imperfect indicative to the subjunctive stem, thus creating, in effect, an imperfect of the subjunctive

17) Cowgill suggests that *-ē- was the regular contraction product of *-ēē-. and that the treatment seen in Osc. deiuaid was analogical. By 1980, however, he had abandoned this idea, and suggested to me in a personal communication that *fusē- might better be interpreted as an ē-preterite of the s-future. The latter proposal was perhaps influenced by Pedersen (1921: 14f.), who derives the imperfect subjunctive from a "conditional" (i.e., a preterite of the future) in *-s-ē (>, *-sem), *-s-s, *-s-t, subsequently enlarged by the *-ē- of amem, -ēē.

18) These examples, of course, are merely intended to illustrate a stage of Proto-Italic when there was as yet no tense agreement between matrix verbs and subjunctives in embedded clauses. The particular choice of syntactic frame is arbitrary; similar sentences could have been constructed using a variety of other clause types.
The transformation of the perfect optative into a true past subjunctive in Germanic was triggered by two developments with close typological parallels in Italic—the elimination of the PIE subjunctive as a distinct mood and the conversion of the perfect indicative into a simple preterite. With the loss of the old subjunctive, Proto-Germanic entered a linguistic stage comparable to the Italic stage represented by sentences 5) and 6). Its response to the absence of tense distinctions in modal subordinate clauses was to replace the optative of the present by the optative of the preterite/perfect in [+past] environments. What, we may now ask, would have been the analogous development in Italic? The only synchronic subjunctive associated with a past tense in early Proto-Italic was the subjunctive of the perfect. The Italian perfect was functionally as well as formally a conflation of the PIE perfect and aorist; Lat. tetigi, -istis still means both 'have touched', with a development of the old perfect meaning, and 'touched', continuing the value of the old aorist. Since there were no modal forms of the imperfect in PIE, and

(cf. Olr. pres. subj. do-bera 'may give', past subj. do-berad 'might give', formally comparable to doga 'chooses', impf. dogaad 'used to choose'). Translated into Italic terms, this procedure would have generated imperfect subjunctives of the type Lat. *faciabam, -bàs or *faksi(é)bam, -bàs, which are not found in any actually attested Italic dialect.

The model of the past subjunctive in Germanic, however, is more instructive. The forms that pattern as past subjunctives in this branch of the family are etymologically simply optatives of the preterite, i.e., optatives of the PIE perfect (cf. Go. tekan 'touch', pret. 3 sg. taitok, pret. subj. taitoki). The transformation of the perfect optative into a true past subjunctive in Germanic was triggered by two developments with close typological parallels in Italic—the elimination of the PIE subjunctive as a distinct mood and the conversion of the perfect indicative into a simple preterite. With the loss of the old subjunctive, Proto-Germanic entered a linguistic stage comparable to the Italic stage represented by sentences 5) and 6). Its response to the absence of tense distinctions in modal subordinate clauses was to replace the optative of the present by the optative of the preterite/perfect in [+past] environments.

What, we may now ask, would have been the analogous development in Italic? The only synchronic subjunctive associated with a past tense in early Proto-Italic was the subjunctive of the perfect. The Italian perfect was functionally as well as formally a conflation of the PIE perfect and aorist; Lat. tetigi, -istis still means both 'have touched', with a development of the old perfect meaning, and 'touched', continuing the value of the old aorist. Since there were no modal forms of the imperfect in PIE, and

since the perfect and aorist were no longer distinguished in early Proto-Italic, the "Germanic" treatment of sentence 6) would have been to substitute the perfect subjunctive—the structural counterpart of Lat. ficeris—for *faksi(é) / *faksi(é)."

The form of the perfect subjunctive in Proto-Italic is seldom explicitly discussed. In Latin, as noted earlier, the perfect subjunctive in -is- (tetigerim, -is; fecerim, -is, etc.) is an optative of the s-future of the perfect, i.e., the future perfect (tetigerö, -is; fecerö, -is, etc.), just as the present subjunctive in -is- (faxim, -is, etc.) is an optative of the simple s-future (faxö, -is). As such, the tetigerim-type represents an innovation that can be no older than the creation of the future perfect itself; to judge from the absence of comparable forms in Oscan-Umbrian, it may be considerably later. A priori, we might have expected that Proto-Italic would have inherited a more archaic type of perfect subjunctive based directly on the unsigmated perfect stem, just as in the present system the non-sigmatic faciä, based directly on the present stem, is firmly entrenched beside faxis. No such r-less (or rather r-less) forms are found in Latin, but they are well-attested in Oscan and Umbrian, where they supply our only examples of the perfect subjunctive in these languages. Significantly, the Oscan-Umbrian perfect subjunctive is formed with the mood sign -ë-—a fact which is obscured, but not concealed, by the conventions of Oscan orthography. The high mid vowel that developed from PIE *-ë in Oscan is not distinguished from the reflex of PIE *i in inscriptions written in the Latin alphabet; perfect subjunctives like 3 sg. faxiäd 'may have done, fecterit' and fuid 'may have been, fuerit' can as easily go back to preforms in *-ë- as in *-ë-. But the ambiguity is resolved in favor of *-ë- by the forms 3 pl. tribarakattins 'ae'dificauerint' and 3 sg. pass. sakrafr 'sacratum sit', both written in the native Oscan alphabet and using the special symbol ã to represent a lower vowel than i.

The Oscan-Umbrian—and no doubt Proto-Italic—perfect subjunctive in *-ë- thus takes its place beside the imperfect subjunctive in *-és- and the first conjugation present subjunctive in *-aë- as the third Italic category in which the vowel *-ë- functions as a mood.

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19) This is true at least for strong verbs; the origin of the preterite optative in weak verbs is necessarily bound up with the problem of the origin of the weak preterite itself.

20) It is easy to see why this happened. In Proto-Germanic, as in every other early IE language, there were many kinds of subordinate clauses—those conveying information assumed to be factually true, for example—that regularly employed the indicative. For obvious semantic reasons, such clauses would routinely have used the preterite (< perfect) after a main verb marked for past time, just as, e.g., Eng. I know that Edward is king translates, in the past, to I knew that Edward was king. It would have been a trivial step for this agreement pattern to spread to clauses that required the subjunctive, with the subjunctive of the preterite (= the old perfect optative) substituting for the present subjunctive in [+past] contexts. The result was the simple sequence of tenses rule seen, e.g., in Go. jah athaitands sumana magivae frab-u hia wes-tu bata 'and calling one of the lads, asked (pret.) what that [clamor] was (pret. subj.)' (Luke 15, 26).

21) The assumption that the PIE perfect and aorist had already fallen together is important for the argument that follows. See, however, note 26.

22) The evidence for the mood sign of the perfect subjunctive in Umbrian is completely ambiguous; cf. Poultney (1959: 137). The form herit, listed as a perfect subjunctive in the older handbooks, has been attractively explained as an infinitive by Rix (1976b).
The only thematic perfect stems in Italic were those based on old thematic roots such as *bhiu-, *bhiul (Ved. *bhiuk), which can be exactly equated with the Vedic Sanskrit root *bhuiy-, the most striking example of this kind.

The root *fē-, however, is not isolated: Latin perfects of the type *dēs-, *plei-, and *strā-, are almost certainly late replacements of root aorists *sē- (*sēh-), *pē- (*pēh-), and *strā- (*strēh-), the regular optatives of which, before the loss of *-ē-, would have been *sāē- (*sēh-), *pāei- (*pēh-), and *strāē- (*strēh-). From such forms, *-ē- was evidently extended to the great mass of perfect stems that ended in a consonant.

The replacement of *-ē- by *-ē- after consonants, which was probably an Italic rather than a purely Osco-Umbrian development, was favored by a number of special circumstances. In perfects of the reduplicated type, optative forms like 3 sg. *fēfakē-ē would regularly have retained their postconsonantal *-ē-.

No *-ē- appeared, however, in the corresponding plural forms, which were based on the weak optative stem in *-ē-. The *-ē- / *-ē- alternation would have led to difficulties in cases where the perfect stem ended in *-s- or *-d-. These consonants were completely assimilated to a follow-

23) The only thematic perfect stems in Italic were those based on old thematic roots; such perfects might have been expected to form subjunctives in *-ē-, replacing PIE thematic optatives in *-ōi-.

24) Ved. *bhūyāh, with the "precautive" ending -ā < *-st, is an inner-Indic replacement of Indo-Iranian *bhūyāt (Avestan āuēyāt).

25) These forms, of course, were eventually replaced in Latin by regularized perfect subjunctives built to the new indicatives in -u- (sēneri, pleineri, strāneri); cf. note 5. Other perfects that would have lost intervocalic *-ē- in the optative were the Italic counterparts of gnōmi, pānī, and crēni (both 'I have separated' and 'I have grown').

26) The choice of the perfect stem *fēfakē- as an example is convenient in view of Osc. fēfaced, but it is not all clear that this verb actually formed a reduplicated perfect in Proto-Italic. Lat. fēcē, -istē, which matches Gk. ἐθῆκα, probably reflects the more original formation.

The optative sign *-ē- / *-ē- offers a better, and indeed the only realistic point of departure. Since intervocalic *-ē- was lost in the Proto-Italic period, *-ē- would have given *-ē- by normal sound change in the optatives of vowel-final perfect stems. Osc. *fused [fuēd], which can be exactly equated with the Vedic Sanskrit root aorist optative "bhūyāh", is the most striking example of this kind.

The subjunctives corresponding to the Latin perfects tetage- and deikē- would thus have emerged in Proto-Italic as *tetage- / *tetagē- and *deikē- / *deikē-. The morphological opacity of *tetage- and *deikē- would have helped trigger the reduplicated type, optative forms like 3 sg. tetage-ē, deikē-ē would have given *-ē- and *tetage-ē, *deikē-ē were eventually transformed to *deikē-ē in Italic, but the ex-

27) This is basically the explanation of Osco-Umbrian *fē- and *fēfakē- given by Lindeman (1982: 303 ff.). But Lindeman wrongly tries to derive the Latin perfect subjunctive fuerē- from the same original paradigm as *fē-, taking fuerē- from the strong stem *bhū-ē- and fuerē-, despite its *-ē- from the weak stem *bhē-ē. He is thus forced to treat the invariant *-ē- of Osco-Umbrian as a post-Italic innovation.

28) It is worth noting, perhaps, that uēnī and kūmīnēd are back to the same paradigm. The Latin long vowel, which is also found in Tocharian, arose by inner-PIE sound change in the 1 sg. and 2 sg., where underlying *gēm-m and *gēm-s both regularly gave *gēm within the parent language. (In the case of the 2 sg. I owe this observation to Alan Nussbaum.) Latin generalized *-ē- to the whole paradigm, while Osco-Umbrian retained the *-ē- of the 3 sg.
act analogical route by which *deikts-, the general perfect stem, came to be combined with the productive subjunctive marker *-ē- is unknown. Still less can be said about the prehistory of the subjunctives corresponding to the Osco-Umbrian j-perfect (cf. Osc. perf. subj. sakafis < *-f-ē-), the Oscan it-perfect (cf. tribarakattins < *-it-ē-), the Umbrian nki-perfect (cf. perf. subj. 3 sg. combišnisı ‘nuntiauerit’ < *-nki-ē-), and the Latin u-perfect (type amāui; Italian perfect subjunctive *amāuer-ē-). To the extent that these formations, all more or less obscure, go back to the Proto-Italic period, they no doubt made their subjunctives in *-ē- < *-jē- according to the productive pattern. They are unlikely to be very old, and have nothing to say about the etymology of the mood sign.

In short, we are still far from being able to write a detailed history of the Proto-Italic perfect subjunctive. Nevertheless, it can be taken as a safe working hypothesis that by the end of the linguistic stage represented by sentences 5) and 6), this category had come to be characterized, regardless of stem-type, by the mood sign *-ē- < *-jē-. Returning now to the problem of the imperfect subjunctive, let us suppose that early Proto-Italic adopted the "Germanic" strategy of substituting the perfect subjunctive for the present subjunctive in [+past] syntactic environments. The effect of this change would have been to establish a crude sequence of tenses rule: present subjunctives in primary sequence alternated with perfect subjunctives in secondary sequence. Some typical 2 sg. forms, chosen to reflect the major perfect stem types, are listed below.

<table>
<thead>
<tr>
<th>primary sequence</th>
<th>secondary sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>'touch'</td>
<td>*tagās / *takās</td>
</tr>
<tr>
<td>'be'</td>
<td>*fiās / *fusīs</td>
</tr>
<tr>
<td>'say'</td>
<td>*deikās / *deikēs</td>
</tr>
<tr>
<td>'come'</td>
<td>*gēnās / *gēnasīs</td>
</tr>
<tr>
<td>'love'</td>
<td>*amaēs / *amāsis</td>
</tr>
</tbody>
</table>

While several of these forms are merely educated guesses, the overall pattern is clear enough. All ordinary verbs formed a perfect subjunctive in *-ē-, which also served as a past subjunctive in [+past] environments, and two present subjunctives, one in *-a- or *-(a)ē-, and the other in *-si-. The functional difference between the two present subjunctives is unknown. Presumably the s-forms originally had a desiderative nuance which was absent from the forms in *-a- and *-(a)ē-, but no such contrast is detectable in Latin, the only Italic language to attest both types. The s-subjunctive, no less than the subjunctive in *-ē- (*-(a)ē-), was fully productive— a point which requires some emphasis in view of the changed situation in the daughter languages. The type is extinct in Osco-Umbrian; its distribution is restricted even in Old Latin, where it is confined to roots ending in a stop (cf. tāxīs, dīxīs) and to root-like complexes ("bases") ending in a long vowel (cf. amāssīs, with secondary gemination). The absence of forms like *forīs (< *fusīs) and *uenerīs (< *gēnāssīs), however, is secondary in Latin, as can be seen from the survival of the corresponding indicatives as s-futures in Oscan and Umbrian (cf. Osc., Umbr. 3 sg. fust 'will be'; Umbr. 2 sg. me- nes 'you will come' (i.e., *benes, with analogical *-es for *-as < *-as-si)). Taken together, the Latin and Osco-Umbrian evidence points to a completely general distribution for both the s-future and its original optative, the s-subjunctive, in Proto-Italic. The significance of this fact will be seen directly.

There was one major difference between the pre-Italic system as just described and that of Proto-Germanic. In Proto-Germanic the PIE perfect developed into a simple preterite, and its optative was correspondingly transformed into a simple past subjunctive. In Latin, however, where the indicative of the perfect retained the dual function of a simple preterite, reflecting the PIE aorist, and a resultant present, reflecting the PIE perfect, there was a corresponding se-

Greek "Attic" futures tenō (root ten-), phtherō (root phther-), etc. < *-esō). The reconstruction *amāgēs for the perfect subjunctive of *amā- is based on the assumption, admittedly speculative, that Proto-Italic had a u-perfect corresponding to Latin amāvi. Nothing will depend on this conjecture in the discussion that follows; any of the imaginable alternatives— *amaēs, *amāēs, *amātiēs, or even *amańkēs— would serve our purposes equally well.

Note also the early forms iu̯neri̯nc and moner intuit, which are best taken as subjunctives of iu̯nae (iu̯neri) and monēr̯, respectively. The -e- of iu̯neri̯nc is probably the reflex of a root-final laryngeal; the -ē- of moner intuit belongs to the base monē-, which was extracted in early Italic from the causative stem *mon-eyelo- (cf. ptc. monitus < *-mon-tos). Other, less satisfactory, views are discussed by Leumann (op. cit., 596).
matic split in the perfect subjunctive. On the one hand, the perfect subjunctive was employed as a past subjunctive in [+ past] syntactic environments, as postulated above. On the other, it retained its function as a resultative present subjunctive—the role it still plays, e.g., in Latin sentences of the type nesció quid fécérís (perf. subj.) 'I don't know what you have done' (cf. sentence 1 above). For purposes of distinguishing the two functions, we may write *tetago₁ for the perfect subjunctive in its past value, and *tetago₂ for the same form in its more original resultative present value. Our table can be recast as follows:

<table>
<thead>
<tr>
<th>present subjunctive</th>
<th>past subj.</th>
<th>resultative pres. subj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*taga₂ / *taksi₂</td>
<td>*tetago₁</td>
<td>*tetago₁</td>
</tr>
<tr>
<td>*fusa₂ / *fusi₂</td>
<td>*fusa₁</td>
<td>*fusa₁</td>
</tr>
<tr>
<td>*deiksa / *deiksa₂</td>
<td>*deiksa₁</td>
<td>*deiksa₁</td>
</tr>
<tr>
<td>*glēna₂ / *glenasi</td>
<td>*glena₁</td>
<td>*glena₁</td>
</tr>
<tr>
<td>*amaśa / *amaśa₂</td>
<td>*amaśa₁</td>
<td>*amaśa₁</td>
</tr>
</tbody>
</table>

The expansion of the perfect subjunctive into the role of a past subjunctive had the desirable effect of allowing tense agreement to be marked between matrix verbs and embedded verbs in certain kinds of complex sentences. But the formal identity of *tetago₁ and *tetago₂ was inconvenient in other ways. The two functions, corresponding roughly to the functions of the later imperfect and perfect subjunctive, were very different; occasionally they even contrasted in identical syntactic environments, as was apparently the case, e.g., in result clauses.31) A priori, there was no reason why *tetago₁, marked for past time but not for *perfectivity,* i.e., completedness vis-à-vis some other action, should have coincided in form with *tetago₂, marked for perfectivity but not for past time. The situation would have encouraged speakers to differentiate between the two forms if a simple method for doing so had presented itself. And as it happened, such a method lay ready to hand.

The form *deiksa₁, built to an s-perfect, was the [+ past] counterpart of the present subjunctives *deiksa and *deiksa₂ from the latter

31) Note, for example, the difference between tam longē aberam ut non niderim (imfp. subj.) 'I was too far away to see' (i.e., seeing was in principle impossible), and tam longē aberam ut nōn niderim (perf. subj.) 'I was so far away that I didn't see' (i.e., circumstances made seeing impossible). Cf. Woodcock (1959: 122–3).
preceeded the *-se- of the imperfect subjunctive was identical with the present stem.\textsuperscript{32}\) The formula was

\begin{align*}
2 \text{ sg. pres. indic.} & \, *amās(i) (< *-ājes[i]; \text{ cf. Lat.} \, amās): \text{ impf. subj.} \\
 & \, *amāsēs: \text{ pres. indic.} \, *deikes(i): \, X = *deikesēs.
\end{align*}

With *deikesēs established beside the present stem *deike-, the replacement of *taksēs and *gēnēsēs by *tangēsēs (2 sg. pres. *tanguēs (i)) and *gēnēsēs (2 sg. pres. *gēnēsēs) was all but inevitable.\textsuperscript{33}

The result was the system reconstructible for late Proto-Italic:

<table>
<thead>
<tr>
<th>present subjunctive</th>
<th>impf. subj.</th>
<th>perf. subj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*tagēs / *taksēs</td>
<td>*tangēsēs</td>
<td>*tetagēs</td>
</tr>
<tr>
<td>*fuēs / *fāsēs</td>
<td>*fuēsēs</td>
<td>*fuēsēs</td>
</tr>
<tr>
<td>*deikēs / *deike-</td>
<td>*deikesēs</td>
<td>*deikesēs</td>
</tr>
<tr>
<td>*gēnēsēs / *gēnēsēs</td>
<td>*gēnēsēs</td>
<td>*gēnēsēs</td>
</tr>
<tr>
<td>*amaēs / *amāsēs</td>
<td>*amāsēs</td>
<td>*amāsēs</td>
</tr>
</tbody>
</table>

The post-Italic history of these forms is well-known. Osco-Umbrian was relatively conservative: although the present subjunctive in *-si- was lost and the s-perfect gave way to other stem-types, the basic structure of the imperfect subjunctive (*present stem + *-se-) and perfect subjunctive (*perfect stem + *-ē-*) was retained. In Latin, on the other hand, the perfect subjunctive in *-ē- was completely replaced by the type tetigerēs < *tetagisinēs, formally an s-subjunctive of the perfect stem with the union vowel *-i- inserted before the mood sign. Whether there was originally a corresponding Proto-Italic type *tetagisē-, which was lost in Osco-Umbrian along with the simple s-subjunctive (*tag-ē-), is impossible to determine.\textsuperscript{34}

\textsuperscript{32}\) The same was true in the second conjugation, compare OLat. pres. subj. prohibēsēs, with the same secondary gemination as in amāsēs, beside impf. subj. prohibēsēs. The substitution of present stems for roots is, of course, extremely common throughout the IE family.

\textsuperscript{33}\) Similarly, imperfect subjunctives in *-isē- were created to present stems in *-i-; cf. factēs < *fakisēs beside factēs < *fakis(i).

\textsuperscript{34}\) Note that the analogical argument presented here depends crucially on the synchronic interpretation of the perfect subjunctives in *-ē- (*tetagēs, *deikēs, etc.) as [+past] counterparts of the present subjunctives in *-si- (*taksēs, *deikesēs, etc.). This pairing of *-ē- (perf. subj.) with *-si- (pres. subj.) would have been perfectly natural so long as forms like *tetagēs were the only perfect subjunctives in the language. But after the rise of the type *tetaksēs there would have been formal, and perhaps also semantic, reasons for speakers to reinterpret *tetagēs as the past subjunctive corresponding specifically to *tagēs, and to associate the innovated *tetaksēs with the s-subjunctive *taksēs. A form like *deikēs would thenceforth probably have patterned as the past of *deikēs, not *deiksēs, and there would have been no motivation for the fundamental proportion *deiksēs: *deikesēs: *taksēs: X. None of this excludes the possibility of a Proto-Italic *tetaksēs, but it does suggest that the imperfect subjunctive *tangēsēs or at least its predecessor *tetaksēs, was the earlier creation.

\textsuperscript{35}\) The perfect infinitive in -isse < *-is-i (tetigisse, fecisse, etc.) is a formation of the same type, superficially resembling the pluperfect subjunctive in the same way that the present infinitive resembles the imperfect subjunctive. See note 9.

\textsuperscript{36}\) There are excellent reasons, in my view, to regard the elimation of the perfect: aorist opposition as one of the earliest common Italic—perhaps even Italo-Celtic—innovations. The roots *fak- ‘do’ and *deik- ‘say’, which base their synchronous perfects on the aorist in Latin (*fēc-, *dix-) but on the reduplicated perfect in Osco-Umbrian (cf. Osc. perf. subj. fecacīd, Umbr. fut. perf. deicasīt < *deidik-), point not to a separate merger of the two categories in the two branches, but merely to a secondary extension of the reduplicated perfect in Osco-Umbrian. It should be noted, however, that the explanation proposed here can easily be accommodated to a theory of Proto-Italic in which the perfect and aorist remained distinct. In place of perfect subjunctives in *-ē- we could, if necessary, simply assume a series of Proto-Italic aorist subjunctives of the type *fuēs, *gēnēs, and *deikēs; the substitution of these for present subjunctives in [+past] environments would have led to a variant of the scenario described above.
(imperfect) subjunctive in *-sē-, the latter generalized from pairs of the type *deiksēs: *deiksēs.

4) the replacement of *deiksēs, *taksēs, etc., by *deikses, *tangēsēs under the influence of verbs like *amā- (pres. stem): *amāsē- (impf. subj.); and

5) in Latin, the substitution of *-isē- for *-ē- in the perfect subjunctive, followed by the analogical reinterpretation of *-is- as part of the perfect stem and the addition of *-sē- to *-is- to form the new pluperfect subjunctive.

If this scenario is correct, the history of tense marking in the Italic subjunctive is methodologically instructive. The problem has traditionally been approached from a purely formal, PIE-centered point of view, with attention focused, e.g., on the question of whether the *-s- of the tense/mood sign *-sē-, should be identified with the *-s- of the PIE desiderative or the *-s- of the PIE sigmatic aorist. In reality, both etymologies are correct: the spread of *-sē- as a past subjunctive marker was made possible by the confusion of the *-s- of *deiksēs, which historically belonged to the s-aorist, with the *-s- of *deiksēs, which historically belonged to the desiderative. The all-important fact is that the creation of the imperfect subjunctive took place at a time when the traditional PIE categories—desiderative, aorist, perfect, subjunctive, optative—had been transformed beyond recognition. The rise of *-sē- as anomalous in PIE terms, was a perfectly natural development in the context of the early Italic system, with its present subjunctive in *-sē- and perfect subjunctive in *-ē-. The lesson is an obvious one, but it deserves to be re-emphasized. Linguistic history is the record of successive synchronic stages, each with structural peculiarities of its own, and each dependent on the structural characteristics, old and new, of its immediate predecessors.

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