

Tocharian Texts in Context

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The Tocharian *s*-preterite

There is no consensus regarding the origin of the Tocharian “*s*-preterite” (Class III). For a summary of the major competing analyses see Malzahn (2010: 208–214). I will contend in what follows that the Tocharian Class III preterite cannot be derived solely either from the “classical” sigmatic aorist (e.g. Ringe 1990 or Kortlandt 1994) or from a modified form of the *h₂e*-aorist (Jasanoff 1988a and 2003: esp. 178 and 192–203). I will argue that the Tocharian Class III preterite reflects a merger of the two PIE aorist types cited.

According to Jasanoff (2003: 71), the oldest form of PIE **h₂e*-presents was:

1Sg	R(ó)- <i>h₂e</i>	1Pl	R(é)- <i>meH</i> (?)
2Sg	R(ó)- <i>th₂e</i>	2Pl	R(é)- <i>e</i>
3Sg	R(ó)- <i>e</i>	3Pl	R(é)- <i>r</i> (<i>s</i>)

Given the sure archaism of perfect second plural **-é* > Vedic *-á* (cf. Jasanoff 2003: 32), there is no justification for doubts about the original shape of the second plural ending, nor any basis for a supposed preceding laryngeal. The crucial fact is the peculiar identity of the third singular and second plural endings.¹ As per Jasanoff (2003: 70 fn. 11), it is indeterminate to what extent specific endings in the present and imperfect *tenses* were altered already in PIE, but the following is likely (cf. Jasanoff 2003: 89):

	Present	Imperfect
1Sg	R(ó)- <i>h₂ei</i>	R(ó)- <i>h₂e</i>
2Sg	R(ó)- <i>th₂ei</i>	R(ó)- <i>th₂e</i>
3Sg	R(ó)- <i>ei</i> (?)	R(ó)- <i>et</i> (?)
3Pl	R(é)- <i>nti</i>	R(é)- <i>r</i> (<i>s</i>)

For the present third singular as also marked by the “hic et nunc” particle *-i* (contra Jasanoff 2003: 70–71) see likewise Kim (2005: 195), but this point is immaterial for what follows. Renewal of the second plural ending as **-te* in the present/imperfect paradigm is also likely, but not strictly provable. For further arguments for renewal of the imperfect third singular as **-e-t* see Jasanoff (2012a).

Jasanoff (2003: 151) sets up a very similar paradigm for the oldest form of the *h₂e*-aorist, but I follow here his revised version (Jasanoff 2012b: 108):

1Sg	R(ó)- <i>h₂e</i>	1Pl	R(ó)- <i>me-</i>
2Sg	R(ó)- <i>th₂e</i>	2Pl	R(ó)-(<i>t</i>) <i>e</i>
3Sg	R(ó)- <i>e</i>	3Pl	R(é)- <i>r</i> <i>s</i>

¹ I forgo any speculations about possible reasons for this match. What is important for my purposes is that its motivation is by any measure not remotely transparent, virtually excluding that it is an innovation.

For Hittite evidence supporting *o*-grade in the *h₂e*-aorist first and second plural (parallel to the strong stem with *e*-grade in the *mi*-conjugation root aorist) see also Melchert (2013: 142–143).

Per Jasanoff (2003: 178 and 2012b: 108), the paradigm above is renewed already in PIE as a “presigmatic” **h₂e*-aorist:

1Sg	R(ó)- <i>h₂e</i>	1Pl R(ó)- <i>me-</i>
2Sg	R(ó)- <i>th₂e</i>	2Pl R(ó)-(<i>t</i>) <i>e</i>
3Sg	R(é)- <i>s-t</i>	3Pl R(é)- <i>rs</i>

This renewal reflects (per Jasanoff 2003: 178 and 192–203) a suppletive replacement of the original third singular by the corresponding imperfect third singular of a lengthened-grade (“Narten”) *s*-present. He justifies this step on the basis of the *unique* match of the sigmatic form in the Tocharian and Hittite preterite third singular in an otherwise asigmatic paradigm, namely the Tocharian Preterite III and Hittite *hi*-preterite (Jasanoff 2003: 176–177):

TochA	TochB	CToch	Hittite
1Sg <i>prakwā</i>	<i>prekuwa*</i>	* <i>prek-(ā)wa</i> ‘asked’	<i>dāḥhun</i> ‘took’
2Sg <i>prakāšt</i>	<i>prekasta</i>	* <i>prek-(ā)sta</i>	<i>dātta</i>
3Sg <i>prakūs</i>	<i>preksa</i>	* <i>prek-(ā)s-a(t)</i>	<i>dāš</i> (< * <i>dās-t</i>)
1Pl <i>prakmās</i>	<i>prekam</i>	* <i>prek-(ā)mā-</i>	<i>dāwen</i>
2Pl * <i>prakās</i>	<i>prekas*/prekso*</i>	* <i>prek-(ā)sā</i>	<i>dāten</i>
3Pl <i>prakār</i>	<i>prekar</i>	* <i>prek-ār/- (ā)rā(s)</i>	<i>dāir</i>

I fully agree that such a match cannot be due to coincidence or independent creation, but it does not justify a quite unbelievable suppletion from a paradigm with no functional or formal point of contact: the *imperfect* of an *s*-present with *ē/e*-grade and a consistent *s*-suffix (**prék-s-ṛ*, **prék-s-s*, **prék-s-t*, etc.) versus a root *aorist* with majority *o*-grade, no *s*-formant and *completely different endings* in the singular (**dóh₃-h₂e*, **dóh₃-th₂e*, **dóh₃-e*, etc.). If “repair” of the third singular ending was needed (to avoid a supposedly inconvenient near-homophony of active third singular R(ó)-*e* and middle third singular R(ó)-*o*), far more likely solutions existed, above all the same renewal as assumed for the imperfect of the *h₂e*-presents: R(ó)-*et* (see above).² The claim that “it is still far simpler to operate with a single unexplained suppletion in the parent language than to assume two separate and unexplained suppletions, one in Hittite and one in Tocharian” (Jasanoff 2003: 179) wrongly assumes that such a suppletion is the only explanation for the matching irregularity.

² That the third singular of the *h₂e*-conjugation root aorist would thus have had the same form as that of the corresponding imperfect of *h₂e*-conjugation root presents would of course have presented no problem, since the same root would not have formed both a root present and a root aorist (just as there was no conflict between a root aorist **é-d^heh₁-t* and an imperfect **é-h₁es-t*).

A closer examination of the Tocharian Class III preterite and Hittite *hi*-preterite suggests an alternative. First, the Tocharian preterite is also sigmatic in the second plural. Since the ending **sā* (alongside extended **sas*, as per Malzahn 2010: 514 and 2011: 48–49) is “utterly obscure” (Jasanoff 2003: 176), it is thus *prima facie* an archaism. It is true that the second plural ending **sā/-sas* is not confined to the Tocharian “*s*-preterite” (Class III), but the Tocharian first singular, second singular, and third plural for all preterites *also* reflect generalized *h₂e*-aorist endings **-h₂e*, **-th₂e*, and **-r(s)* (Jasanoff 2003: 175–176). This pattern strongly points to the same source for the second plural ending. In particular, for the Tocharian Preterite III and Hittite *hi*-preterite: “In all structurally significant details, therefore, the Hittite and Tocharian paradigms are identical.” (Jasanoff loc. cit.).

Second, the Tocharian third singular ending requires something beyond the **-s*-, and the Hittite ending may, but need not, continue a final **-s-t*. On structural grounds, **-s-t* may reflect the same renewal as in the *h₂e*-present imperfect 3Sg: **-s* → **-s-t* like **-e* → **-e-t*. One may therefore assume that the *original h₂e*-aorist third singular ending was simply **-s* (thus already Watkins 1969: 54 and Yoshida 1993: 33–34), probably renewed already in PIE (though parallel independent renewal cannot be entirely excluded): **-s* → **-s-t*. The presence of an ending **-s* just in the third singular and second plural of the *h₂e*-aorist can hardly be a coincidence, since it *matches* the same peculiar distribution of the ending **-e* in the *h₂e*-present and is equally unmotivated (see above with footnote 1).

Furthermore, not only Tocharian but also Hittite likely reflects the same peculiar distribution of **-s* just in the third singular and second plural. A second plural ending with *-s* is directly attested in *hi*-verbs in *-i-* and *-u-*: compare for *pai-* ‘give’ Pres2Sg *paiitti* (OH/NS), Pres2Pl *pišten* (MH/MS), Imv2Pl *pišten* (MH/MS); for *dai-* ‘put’ Pres2Sg *daiitti/taiitti* (OH/NS), Pret2Pl *daišten* (OH/OS); for *nai-* ‘turn’ Pres2Sg *naiitti* (MH/MS), Pres2Pl *naišten* (MH/MS), Imv2Pl *naišten* (MH/MS); for *au(š)-* ‘see’ Pres2Sg *autti* (OH/OS), Pres2Pl *ušt[ē]ni* (OH/OS), Imv2Pl *aušten* (MH/MS). For further data see Kloekhorst (2008a). Per Jasanoff (2003: 120), the Hittite pattern is based entirely on an active “*si*-imperative” **néiH-s-i* (= Vedic *néši* ‘lead!’) indirectly reflected in Hittite Imv2SgM-P *nešhut* (2003: 184), whose *-s-* spreads first to the Imv2Pl **nēšten* (later remade as *naišten*), then to other *hi*-conjugation “*i*-presents”. It next spread to the Pret2Pl (based on the identity of Imv2Pl and Pret2Pl in Hittite), and finally to the Pres2Pl. Such a scenario is not impossible, but it rests on a series of unverifiable steps. Most problematic for such an account are the older zero-grade forms *pišten(i)* and *uštēni*, for which the paradigm of *nai-* (with an allomorphy of strong stem *nai-* versus weak stem *nē-*) provides no model (we expect either some trace of **pe/ēšten(i)* and **u-uš-te-n(i)* = /o:sten(i)/ or only renewed *paišten* and *aušten*). One should note that attested 2Pl *pešten* is only late and obviously secondary due to the confusion of *e/i* before *s* in New Hittite. Jasanoff’s derivation also requires that a feature of an entire class be based on the alleged pattern of a single verb, one which furthermore did not originally belong to the class (hence precisely the difference of weak stem *nē-* < **néiH-* versus stems in *-Cī/-Cy-* < **Cih₁-C°/-Ch₁y-V°*).

Given the undeniable Tocharian evidence for *-s in the second plural ending of the *h₂e*-aorist, it is rather more likely with Kloekhorst (2008a) that the Hittite second plural ending was originally *-šten(i)* in all *hi*-verbs. His own formulation is unacceptably vague: "replacement" of *-šten(i)* by *-ten(i)* in verbs with roots ending in a consonant "took place in pre-Hittite times already, probably for phonotactic reasons: the Hittites could not easily cope with consonant clusters containing an interconsonantal *-š-*" (2008a: 497). Does "replacement" refer to a phonological or morphological process, and what is the evidence for the alleged phonotactic difficulty?

Deletion of **s* in an environment **-CsC-* is clearly too broad: in addition to the paradigms of athematic *karš-* 'cut' and *arš-* 'flow' (where one could appeal to intraparadigmatic leveling) note especially *war(a)šma-* 'log' < **we/or-smo-* (Watkins 2002: 879–881) and *par(a)štu-* 'bud, shoot' < a virtual **pórstu-* cognate with Arm. *ort* 'vine' and Gr. *πρόρθος* 'shoot, twig' < **pórsto-* (sense and derivation thus *pace* Kloekhorst 2008b: 645–646). Thus the second plurals *arteni* and *ārten* to *ar-* 'arrive' cannot be phonologically regular from **ārs-te-*. Given *pašš-* 'swallow' < **peh₃s-*, a sequence **dóh₃s-te-* could also hardly yield *dāttēn* 'you (pl.) took/take!'. Kloekhorst (2008b: 805) assumes a preform **dh₃-stēni* with zero grade of the root, but the telic sense points to an original *h₂e*-aorist, and Old Hittite/Old Script shows full grade in Pret1Pl *dāwen* and Imv2Pl *dāttēn*. However, I know of no obvious probative counterexamples to regular loss of **s* in a sequence of stop/*h₂*+*s*+stop: all attested examples could easily be due to analogical maintenance or restoration (*takkišzi/takkišta* 'wield, inflict' < **téks-t(i)* after the rest of the paradigm, likewise *paḥ(haš)ti* etc. 'protect' after original third singular *paḥša(ri)*, iteratives in **-T/h₂-ške/o-* with preserved *-s-* after stems in *-V-ške/o-*, then anaptyxis to *-T/hiške/a-*). Thus *-ten(i)* for **-sten(i)* is possibly regular in *ak(k)-* 'die', *šakk-/šekk-* 'know', *tarn(a)-* 'let go' (weak stem **ṭn(K)h₂-*), *wašt-* 'sin', *watarnahh-* 'command', *wewakk-* 'demand repeatedly', etc. *Pace* Kloekhorst (2008a: 497 and 2008b: 509), *lā(i)-* 'let go' is not necessarily an original *hi*-verb. It would be unsurprising if the phonologically regular second plurals in a few stems in *-r-* (**āršten(i)*, **iškāršten(i)*, **išparšten(i)*) plus **dāšten(i)*, being synchronically aberrant, were regularized.

I do not absolutely insist on the preceding scenario, and some other third account of the source of the attested *-s-* in *pišten(i)* etc. is conceivable. What I do assert is that even if the regular Hittite second plural ending of the *hi*-conjugation was simple *-ten(i)* reflecting **-te-*, the latter may be a trivial replacement not only of **-e* in the *h₂e*-present, but also of **-s* in the *h₂e*-aorist, based on the corresponding *mi*-conjugation ending. On the contrary, the Tocharian aorist second plural in **-sä* cannot be credibly explained as an innovation and must be an archaism continuing in my view PIE **-s*.

I believe the combined facts of Hittite and Tocharian demand that we reconstruct for early PIE three aorists: (1) standard root aorists with R(é)/zero ablaut (with the strong stem in all but the third plural, as per Hoffmann (1968: 7–8), Hart (1980), Barton (1985), Jasanoff (2003: 83), et al.) and endings **-m*, **-s*, **-t*, **-me-*, **-te*, **-ent*; (2) standard sigmatic aorists in R(é)-s-/R(é)-s- with "acrostatic" inflection and a suffix **-s-* and endings **-m*, **-s*, **-t*, **-me-*, **-te*, **-ent*; (3) *h₂e*-aorists with ablaut R(ó)/(é) (with the

strong stem in all but the third plural, per Jasanoff 2012b: 108 and Melchert 2013: 142–143) and endings **-h₂e*, **-th₂e*, **-s(-t)*, **-me-*, **-s*, **-r(s)*.

I assume that Hittite lost the sigmatic aorist as a category. The *h₂e*-aorist is continued in the *hi*-conjugation preterite (with some original *h₂e*-aorists secondarily forming *hi*-presents). It can hardly be coincidence that the one branch (Anatolian) that maintained the *h₂e*-presents as a living category also preserved the *h₂e*-aorists at the expense of the sigmatic aorists. On the testimony of Hittite, Anatolian also generalized *o*-grade of the root to the third plural (NB Pret3Pl *aker* 'died' in Old Hittite/Old Script with the strong stem and see Melchert 2013: 142). In the second plural it either: (1) extended the original ending **-s* with **-te(n)* and remodeled present second plural **-teni* to **-stēni* based upon it (partially reduced to *-ten(i)* by phonological change); or (2) it simply replaced aorist second plural **-s* with **-te(n)*, just as it replaced present second plural **-e* with **-te(ni)*.

I regard as an open and decidedly secondary question whether Hittite attests any relics of the sigmatic aorist. One candidate is *g(a)nešš-* 'recognize' (thus Rix et al. 2001: 168–169, also as an alternative Oettinger 1979: 199). However, given the evidence for a PIE root aorist (most notably Gk. *ἐγνων*) in a telic root where it is to be expected, assumption of a competing sigmatic aorist in PIE is unlikely (see the similar arguments of Harðarson 1993: 79 and 101–102). For alternative analyses of Hitt. *g(a)nešš-* as an *s*-present see Jasanoff (1988b and 2003: 135–136), followed by Harðarson (1993: 79, a "Narten-present" **ḡnéh₃s-*, **ḡnéh₃s-* with a generalized strong stem in Hittite) and Kloekhorst (2009, **ḡnéh₃s-*, **ḡnh₃s-* with a generalized weak stem showing anaptyxis). For further discussion of Hitt. *g(a)nešš-* and its possible relationship to Tocharian Preterite III *kñas-* see below.

I have expressed above severe skepticism regarding the derivation by Jasanoff (2003: 120) of the *-s-* of Hittite *hi*-conjugation second person plural forms in *-š-t°*. However, I find compelling his arguments (2003: 182–184) that the peculiar Imv2SgM-P *nešhut* 'turn!' (intr.) is extremely hard to motivate except as modeled on a missing active Imv2Sg **neši* < **neiH-si* (for arguments against the alternative analysis of Oettinger 2007 see Jasanoff 2012c: 128–130). I therefore think that there is a fair chance that *nešhut* does indirectly reflect a sigmatic aorist subjunctive **neiH-s-e/o-*. For Jasanoff, of course, the root *neiH-* originally formed a *h₂e*-aorist that was only secondarily transformed into the "pre-sigmatic" aorist, but the semantics of the root and all reflexes in Hittite and elsewhere are also compatible with an original **h₂e*-present which stood alongside a (fully) sigmatic aorist. The attested *hi*-preterite in Hittite could easily be a back-formation from the *hi*-present.³ One must bear in mind that the crucial form Imv2SgM *nešhut* is first attested in a Middle Script text beside *nišhut*, leaving its probative value less than entirely assured. I thus regard the existence of a sigmatic aorist

³ The unusual vocalism of the weak stem *nē-* (Pres3Pl *nē(y)anzi*, Ptc *nē(y)ant-*) reflecting **neiH-* actually tends to favor an original *h₂e*-present, since as indicated above, Hittite eliminated *e*-vocalism in the *h₂e*-aorist, but since Hittite did inherit *e*-vocalism in the *h₂e*-aorist third plural, this argument cannot be viewed as compelling.

of **neiH-* already in PIE and its inheritance into pre-Hittite as probable, but less than certain.

In Tocharian we find a very different and complex development due to the fatal merger of **o* and **ē* into the Proto-Tocharian vowel represented here as **æ*. This change led to sigmatic and *h₂e*-aorist paradigms with identical root vocalism (I assume that Tocharian generalized *ē*-grade in the sigmatic aorist active and *o*-grade in the *h₂e*-aorist to the third plural), but a difference in stem and endings: e.g. 1Sg **C'æC-s-ŋ* vs. **CæC-h₂e*. The paradigm of the Preterite III indicative active cited above shows an inflection based entirely on the *h₂e*-aorist (with 2Pl **-s* extended at some point to **-sā* after 1Pl **-mä* or otherwise remodeled to **-sas*), but Tocharian A regularly and B partially show palatalization of root-initial consonants reflecting **CēC(-s-)*: e.g. Tocharian A 3Sg *ñakäs*, 3Pl *ñakär* 'destroyed', Tocharian B 3Sg *lyauksa*, 3Pl *lyaukar* 'illuminated'. It is crucial to note that palatalization in Tocharian B is *not* confined to the third person: 1Sg *ñauskuwa* 'squeezed', 1Sg *pelykwa* 'burned' (see further on palatalization in Preterite III Malzahn 2010: 200–205).

The sigmatic aorist is also likely reflected in the thoroughly sigmatic middle type shown by most Preterite III verbs (again illustrated by *pärk-* 'ask'):

Tocharian A		Tocharian B	
1Sg <i>präkse</i>	1Pl <i>präksāmät</i>	1Sg <i>parksamai</i>	1Pl <i>parksamte</i>
2Sg <i>präksäte</i>	2Pl <i>präksāc</i>	2Sg <i>parksatai</i>	2Pl <i>parksat</i>
3Sg <i>präksāt</i>	3Pl <i>präksānt</i>	3Sg <i>parksate</i>	3Pl <i>parksante</i>

Such a derivation is not contradicted by the appearance of a few asigmatic preterite middles from original *h₂e*-aorists which show intransitive meaning versus their active counterparts: Tocharian A Pret3Sg *nakät*, Pret3Pl *nakänt* 'perished' versus active 3Sg *ñakäs*, 3Pl *ñakär* 'destroyed' cited above.⁴

Likewise, since Indo-Iranian – like the rest of "Core Indo-European" – eliminates the *h₂e*-aorist as a living category and shows replacement of standard root aorists of the *mi*-conjugation by sigmatic aorists (see Harðarson 1993: 96–101), it is also entirely unsurprising that we find asigmatic optatives alongside sigmatic aorist indicatives, predictably with certain tell-tale features identifying them as ultimately deriving from *h₂e*-aorists (see Jasanoff 2003: 184–188). The existence of such relics in no way requires assumption of a "pre-sigmatic" aorist.⁵

⁴ Their archaic status is reflected in their prehistoric **o*-vocalism and intransitive (not oppositional middle) sense (see Jasanoff 2003: 180), but their lack of *-s-* is entirely predictable from their *h₂e*-aorist origins. For new arguments for **nek-* in particular as a *h₂e*-aorist see Melchert (2012: 181–182).

⁵ Harðarson (1993: 113–115) claims that the presence of asigmatic aorist optatives alongside sigmatic aorist indicatives is a secondary development of Sanskrit and that examples of sigmatic optatives in Avestan, Greek, and Latin prove that the aorist optative (active) was entirely sigmatic in PIE. However, his own arguments for the great productivity of the sigmatic aorist in "Core Indo-European" fatally undermine the probative value of the non-Indic evidence, which may easily represent prehistoric innovations in the respective languages.

As for further evidence for the sigmatic aorist in Tocharian, Jasanoff (2003: 180–182) presents attractive arguments that Tocharian Class VIII Presents in **-se/o-* are in origin subjunctives matching Class III Preterites. If so, they may continue sigmatic aorist subjunctives. However, pending a satisfactory account of the overall status of "*s*-presents" in PIE and their ablaut pattern(s), other scenarios remain possible (see the summary in Malzahn 2010: 429–432).

Before leaving Tocharian, I note finally that the outcome of the *imperfect* of a "Narten" *s*-present **ǵnéh₃-s-*, **ǵnéh₃-s-* 'recognizes, knows' (with trivially generalized strong stem) would have been effectively identical to that of the standard *s*-aorist, whence attested Tocharian A Preterite III 1Sg *kñasu*, 2Sg *kñasāt* (for which see Malzahn 2010: 609–610 with references). That the matching present was (so far as we know) eliminated by the competing nasal present (Present VI *knānaš*) would hardly be shocking. An acrostic *s*-present **ǵnéh₃-s-*, **ǵnéh₃-s-* (Jasanoff 1998b) thus can account for both Hittite *g(a)nešš-* and Tocharian A Preterite III *kñas-*, while the alternate account of the Hittite verb in Kloekhorst (2009) cited above leaves the Tocharian counterpart unexplained.⁶

I must conclude by openly acknowledging that in positing a (fully) sigmatic aorist in early PIE alongside the standard root aorist and that of the *h₂e*-conjugation I raise issues that I cannot begin to address adequately here. On systemic grounds, the sigmatic aorist should have functioned as a characterized aorist to atelic roots that formed root presents. But to standard root presents, *h₂e*-presents or both? Answering this question is going to be challenging. Assignment of attested Tocharian Preterite III examples to the original sigmatic aorist or to the *h₂e*-aorist is complicated by: (a) the productivity of the sigmatic aorist in Tocharian and "Core Indo-European" (mere coexistence of attested *s*-preterites in Tocharian and sigmatic aorists elsewhere is not sure proof of PIE status); (b) the loss of contrast in Hittite between *h₂e*-aorists and *h₂e*-presents (the attested present and preterite of *hi*-conjugation verbs notoriously are based on the same stem); (c) the unreliability of assigning PIE verbal roots to root aorists or root presents based solely on lexical semantics (e.g., was **neiH-* 'turn' telic or atelic?).

To whatever extent this question turns out to be answerable, I contend that the attested facts of Tocharian, Hittite and "Core Indo-European" can be accounted for without attributing to Proto-Indo-European a hybrid "pre-sigmatic" aorist created by an unmotivated and not remotely credible suppletion. As in other aspects of its grammar, Tocharian has in this case preserved some genuine archaisms (most notably the **-s* ending of the *h₂e*-aorist second plural), and the facts of Tocharian along with those of Hittite (Anatolian) do require significant revision to our model of the PIE verb. However, neither is Tocharian so archaic nor are the required revisions necessary to PIE grammar so radical as sometimes portrayed.

⁶ I find the assumption of independent creations in Hittite and Tocharian (e.g. Harðarson 1993: 79) a serious violation of *entia non sunt multiplicanda*.

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