



**HAL**  
open science

# Notes on a Middle Persian sound change: Greek $\nu\alpha\tau\iota\varsigma$ and features of vowel length

Agnes Korn

► **To cite this version:**

Agnes Korn. Notes on a Middle Persian sound change: Greek  $\nu\alpha\tau\iota\varsigma$  and features of vowel length. DABIR, 2021, 8, pp.101-110. halshs-02985373

**HAL Id: halshs-02985373**

**<https://shs.hal.science/halshs-02985373>**

Submitted on 11 Oct 2021

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



# dabj̄r

Digital Archive of Brief notes & Iran Review

**№.8.2021**



JORDAN CENTER  
FOR PERSIAN STUDIES

[www.dabirjournal.org](http://www.dabirjournal.org)

ISSN: 2470-4040







*xšnaoθrahe ahurahe mazdā*

Detail from above the entrance of Tehran's fire temple, 1286š/1917–18. Photo by © Shervin Farridnejad

## **The Digital Archive of Brief Notes & Iran Review (DABIR)**

ISSN: 2470-4040

[www.dabirjournal.org](http://www.dabirjournal.org)

Samuel Jordan Center for Persian Studies and Culture

University of California, Irvine

1st Floor Humanities Gateway

Irvine, CA 92697-3370

### **Editor-in-Chief**

Touraj Daryaee (University of California, Irvine)

### **Editors**

Parsa Daneshmand (IHAC, Northeast Normal University, Changchun / University College London)

Shervin Farridnejad (Freie Universität Berlin/Österreichische Akademie der Wissenschaften, Wien)

Judith A. Lerner (ISAW NYU)

### **Book Review Editor**

Shervin Farridnejad (Freie Universität Berlin/Österreichische Akademie der Wissenschaften, Wien)

### **Advisory Board**

Samra Azarnouche (École pratique des hautes études); Dominic P. Brookshaw (Oxford University); Matthew Canepa (University of Minnesota); Ashk Dahlén (Uppsala University); Peyvand Firouzeh (Cambridge University); Leonardo Gregoratti (Durham University); Frantz Grenet (Collège de France); Wouter F.M. Henkelman (École Pratique des Hautes Études); Rasoul Jafarian (Tehran University); Nasir al-Ka'abi (University of Kufa); Andromache Karanika (UC Irvine); Agnes Korn (CNRS, UMR Mondes Iranien et Indien); Lloyd Llewellyn-Jones (University of Edinburgh); Jason Mokhtarin (University of Indiana); Ali Mousavi (UC Irvine); Mahmoud Omidasalar (CSU Los Angeles); Antonio Panaino (University of Bologna); Alka Patel (UC Irvine); Richard Payne (University of Chicago); Khodadad Rezakhani (History, UCLA); Vesta Sarkhosh Curtis (British Museum); M. Rahim Shayegan (UCLA); Rolf Strootman (Utrecht University); Giusto Traina (University of Paris-Sorbonne); Mohsen Zakeri (University of Göttingen)

Logo design by Charles Li

Layout and typesetting by Kouros Beighpour

# Contents

## Articles

- |    |   |     |
|----|---|-----|
| 1  | Alisher Begmatov: Two Sogdian Toponyms in Arabic and Chinese Sources, and their Attestation as Commodity Terms in Sogdian and Uyghur Economical Documents | 1   |
| 2  | Alberto Cantera: Avestan texts in context (2): the <i>Nērang ī ātaxš abrōxtan</i> and the “eternal fire”  | 7   |
| 3  | Henry P. Colburn: A Parthian Shot of Potential Arsacid Date   | 35  |
| 4  | Omar Coloru: The city of brotherly love. The language of family affection in the Artaxiad dynasty between the Hellenistic and the Parthian world          | 41  |
| 5  | Majid Daneshgar: Persianate Aspects of the Malay-Indonesian World: Some Rare Manuscripts in the Leiden University Library                                 | 51  |
| 6  | Charles G. Häberl: <i>priuš</i> and <i>zur</i> : Two Transliteration Artifacts in the Mandaean <i>Great Treasure</i>                                      | 79  |
| 7  | Charles W. King: The Hunnic attack on Persia: Chronology, context, and the accounts of Priscus and Thomas   | 85  |
| 8  | Agnes Korn: Notes on a Middle Persian sound change: Greek Ἀναίτις and features of vowel length  | 101 |
| 9  | D. T. Potts: The spurious fifth century date for the cultivation of sugar cane ( <i>Saccharum officinarum</i> ) in Khuzestan                              | 111 |
| 10 | Hossein Sheikh: From Mesopotamia to Khotan: Payment clauses in Eastern Middle Iranian languages and their historical backgrounds                          | 118 |
| 11 | محمد توکلیان: یک امپراطور ناشناخته در نقش برجسته شاپور یکم ساسانی: تنگ چوگان؛ بیشاپور ۳   | 137 |

## Reviews

- |    |  |
|----|--|
| 12 | Hossein Sheikh: Scheunchen, Tobias. <i>Cosmology, law, and elites in late antiquity: Marriage and slavery in Zoroastrianism, Eastern Christianity, and Islam</i> (Arbeitsmaterialien zum Orient 32). Baden-Baden: Ergon Verlag, 2019. 144 pages. ISBN-13: 978-3956504679. 32,00 €. 160 |
| 13 | Sun Wujun: Review of Ge, Chengyong [葛承雍]. <i>Hu Han Zhongguo yu Wailai Wenming</i> 胡漢中國與外來文明 [Han and Hu: China in Contact with Foreign Civilizations]. Beijing, Sanlian Shudian, 2019. 5 vols. (in Chinese with English abstract) 163   |

**dabj̄r**

Digital Archive of Brief notes & Iran Review

**№.8.2021**

**ISSN: 2470 - 4040**

© Samuel Jordan Center for Persian Studies & Culture  
University of California, Irvine

## Notes on a Middle Persian sound change: Greek Ἀναίτις and features of vowel length

Agnes Korn

CNRS, Paris / UMR 8401 Centre de Recherche sur le Monde Iranien (CeRMI)

This article discusses additional evidence for the Middle Persian lengthening of *i* and *u* in final syllables suggested by KORN 2009. It removes the apparent counterexample of Greek “Anaītis”, which would appear to speak against the lengthening being linked to voiced stops, and presents evidence from phonetic research that vowel height can play a role in lengthening processes, which explains why Middle Persian *a* is not lengthened.

### 1. Introduction

In KORN 2009, an argument was put forward suggesting that unetymologically long *i* and *u* in Persian are due to a regular sound change rather than an analogical process. Old Persian *i* and *u* would thus yield Middle Persian *ī* and *ū*, respectively, when preceding word-final voiced stops and *z* (1).

[1] Old Persian [*i, u*] / \_[*p, t, k, č*] > Middle Persian [*ī, ū*] / \_[*b, d, g, z*] #

Characteristic examples include those in (2).<sup>1</sup>

[2]	Old Iranian	Middle / New Persian	Balochi
	*-i-ta-	past stem suffix - <i>id</i>	- <i>it</i>
	Anāhītā-	Nāhīd ‘Venus’	
	*-uta-	e.g. MPZ <i>āšnūd</i> , MPM <i>išnūd</i> ‘heard’	
	Av. <i>huxšnuta-</i>	NP <i>xušnūd</i> ‘contented’	
	*zānu-ka-	<i>zānūg</i> ‘knee’	<i>zānuk</i>
	*-i-ka- e.g. Av. <i>ka’nikā-</i>	MP <i>kanīg</i> ‘girl’	- <i>ik</i> e.g. <i>jīnik</i> ‘girl’ <sup>2</sup>
	*-ič-	diminutive suffix - <i>iz</i> , e.g. <i>murw-iz-ag</i> ‘little bird’	

1- Ir. = Iranian; MP = Middle Persian; MPZ = Zoroastrian MP (Pahlavi), MPM = Manichaean MP.

2- The part of the word preceding the suffix is a cognate of MP *kanīg*, it is just given for comparison.

The argument further suggested that this change took place in the context of the voicing of Old Persian voiceless stops (including the affricate *č*). The process can thus be described as an instance of the cross-linguistically very frequent lengthening of vowels preceding voiced stops, one variety of which is known as “Lachmann’s Law”. JASANOFF (2004: 407, referring to English) notes that the mechanism at work is due to “the natural tendency of speakers to assign part of the voicing of the consonant to the preceding vowel”. In languages with phonemic quantity contrast, the result of such a lengthening can be interpreted as instances of long vowels (Henning Reetz, p.c.).

A further argument for the lengthening being linked to the Persian voicing of postvocalic stops comes from Balochi, which characteristically reflects Old Ir. stops without any voicing, and shows no lengthening of *i*, *u* (cf. the instances in (2)).

The 2009 article could not quite explain the apparent presence of a long vowel alongside a voiceless *t* in Greek Ἀνάτις, and the fact that *a* is not lengthened in Middle Persian while *i* and *u* are. In the meantime, data have come to my attention that seem to permit more straightforward explanations than the reasoning suggested in 2009.<sup>3</sup>

## 2. The apparent counterevidence of Ἀνάτις<sup>4</sup>

### 2.1. (Supposed) attestations

As mentioned by KORN (2009: 206f.), some editions of Plutarch’s *Lives* (27.11 in ZIEGLER & GÄRTNER 1996: 347; 27.8 in SINTENIS 1860: 132)<sup>5</sup> present a form Ἀνάτιν (the accusative of an apparent Ἀνάτις) referring to the Iranian goddess *Anāhitā*.<sup>6</sup> The same form occurs in BOISSEVAIN’s (1895: 386) standard edition of Cassius Dio’s *Roman Histories* (36.48; 36.31 in some other editions).<sup>7</sup> If the Greek forms were correctly given, they would contradict the suggestion that the lengthening of Old Ir. *i*, *u* in the prehistory of Persian was connected with the voicing of the following obstruent, inasmuch as their circumflex appears to show a long vowel followed by the (at that time) voiceless *-t*.

However, upon closer inspection this Ἀνάτιν is not a real form. It seems to be a conflation, maybe by SINTENIS (1860: vii, 132), of two logically different and incommensurate things: (a) the first one being the actual accent of one of the attested manuscript forms (ἀνείτιν) in the Plutarch passage,<sup>8</sup> (b) the second one an emendation of this passage proposed by KORAĒS (1813), which KORAĒS does not insert in the text (p. 306) but discusses in the notes (p. 450) – however, what KORAĒS actually suggests is not Ἀνάτιν, but Ἀνάτιν

3- My sincere thanks go to Alexis Manašter Ramer, who alerted me to the lack of evidence for a long *i* in Ἀνάτις and suggested to work on the topic together. He contributed a previous version of Section 2.1.-2.2., but various factors called him to other fields before the cooperation could be finalized, and he did not wish to appear as co-author.

I am also grateful to Yitzhak Dana, Timothy Duff, Alexander Nikolaev, Michael Weiss and François Jacquesson for discussion about Greek philology and to Anja Geumann for advice on phonetic matters.

4- The essential points and the structure of 2.1.-2.2. was contributed by Alexis Manašter Ramer (see note 3) while work on details and the final formulations of the entire section 2. are the result of our cooperation.

5- Plutarch (AD 46 to after 119).

6- For the etymology and meaning of *Anāhitā*-, see the contributions by SCHWARTZ (2006: 103f.), KELLENS 2003, OETTINGER 2001 and GOTÖ (2000: 160f.).

7- Lucius Cassius Dio (ca. 155 to ca. 235).

8- The actually attested variants in the various manuscripts are ἀνείτιν, ἀνείτιν, and ἀνείτιν, differing in accentuation, but all with *-ei-* vocalism (SINTENIS 1860: vii, ZIEGLER & GÄRTNER 1996: 347 n. ad loc.).



(with an acute rather than a circumflex),<sup>9</sup> thus implying a short vowel.

The accentuation of Ἀναΐτιν is thus a simple invention: SINTENIS 1860 (if it was in fact he) appears to have combined the circumflex found in some (but not all) manuscripts on a form containing -ει- on the one hand (which would say nothing about the quantity of the original ι because ει is a diphthong in Greek and automatically long) with the emended vocalism \*-αῑ- (where a circumflex would indeed be a crucial sign of vowel length) suggested by CLAVIER (1802) and KORAËS on the other. This yields a ghost form that has no claim to reality.

The accent aside, the conflated form Ἀναΐτιν, which has been reprinted in the various later editions, may not even be what Plutarch intended as to vocalism. It is possible that he intended the form ANEITIS, which is indeed attested in medieval manuscripts (but rarely in ancient ones), or the frequently attested ancient ANAEITIS found on coins.<sup>10</sup> There is thus no reason to suppose that Plutarch intended the editorially restored ANAITIS (though this also cannot be excluded), and no good reason to accept the emendation even as to the vocalism.

In the second case of the supposed Ἀναΐτιν, viz. in BOISSEVAIN's edition of Cassius Dio, none of the manuscripts have such a form, but rather an otherwise unknown Μαναιτιν [sic], variously accented. The form Ἀναΐτιν (acute accent, thus short vowel) is an emendation<sup>11</sup> by FABRICIUS & REIMARUS (1750: 104), while the circumflexed Ἀναΐτιν is a hyper-emendation, as it were, by BOISSEVAIN (1895: 386), who cites the form as occurring in Plutarch, and must thus have been either directly or indirectly influenced by SINTENIS' (1860) edition of Plutarch.

Thus, whereas it initially seemed that there are two independent attestations of our name with a long vowel in Plutarch and in Dio, in reality there is no attestation, but a chain of emendations, which moreover are directly dependent on each other and only go so far as to identify the Iranian goddess, but may not be fully correct even on the spelling of this name as used by this or that ancient author, and are in any case entirely arbitrary when it comes to the accent (i.e. evidence for vowel length).

9- KORAËS in turn attributes the idea “τῷ Κλαυερῷ”. This surely refers to CLAVIER (1802: 487), a French translation of Plutarch, featuring “Anitis” (presumably the latinized form of the Greek manuscript form with -ει-) in the text, but a footnote has the emendation “Lisez: *Anaitis*” – the name being given in French/Latin, there is no accent, and so the Greek acute must be due to KORAËS.

10- See the discussion by ROBINSON (1921: 21, no. 31).

11- Of course, an emendation is virtually inescapable, since the text of Dio demands a geographical term referring to a region of Armenia that corresponds to the name of a divinity (καὶ τὴν Μαναιτιν χώραν τῆς τε Ἀρμενίας οὖσαν καὶ θεῶ τινι ἐπωνύμῳ ἀνακειμένην “and the Manaitis land, which belongs to Armenia and is dedicated to some eponymous deity”, tr. ours). This divinity can only have been Anahita, and Pliny, *Natural History* (5.24(20).83, MAYHOFF 1906: 396) refers to what appears to be the same region as “Anaitica”. According to DE JONG (1997: 277), this is the region of Acilesene (Armenian *Ekeleac*). At any rate, we can at most restore an unaccented “Ἀνα(ε)τιν”, since both the exact spelling (as noted, the simple -αι- is less likely than -αιε-) and *a fortiori* the accentuation is beyond our power to recover.

There is a further issue in that BOISSEVAIN 1895 phrases his comment in a way suggesting that the nom. sg. \*Ἀνάτις (with the circumflex corresponding to the supposed \*Ἀνάτιν) occurred in Strabo's *Geography* 12.3.37.<sup>12</sup> This is not the case either, though, since this passage has the gen.sg. Ἀνάτιδος (whose accentuation, even if it were original, would tell us nothing, since in the antepenultimate Greek only allows the acute regardless of the length of the vowel). Nor do the other attestations of the name in Strabo (11.8.4, 11.14.16 and 15.3.15) take us any further, as they all have Ἀνάτιδος; nor does the edition by RADT (2002-2011) give any variants \*Ἀνάτι- or a note by RADT quoting such a form.<sup>13</sup>

It is not quite clear what led BOISSEVAIN to quote a form Ἀνάτις, but the issue is immaterial insofar as it would not shake the conclusion: The attested forms tell us nothing about the quantity of the -ι-, and the forms with circumflex on αῖ are all inventions. Nevertheless, “Ἀνάτις” has been repeated with considerable certainty in Greek handbooks such as the standard work on Greek personal names, PAPE & BENSELER (1911/I: 82: “Ἀνάτις, ἰδος, acc. ιν”), and in the Iranological literature, for instance the dictionary of Old Iranian (BARTHOLOMAE 1904: 125: “weibliche Gottheit, Ἀνάτις”).<sup>14</sup>

## 2.2. Problematics of the transmission

Even if \*Ἀνάτιν (or rather \*ἀνάτιν, since we are dealing with manuscripts written in minuscule throughout) were attested, it would not prove that the vowel had been long in Plutarch's pronunciation, or what his spelling was. The accent marks of medieval manuscripts are in general undependable, and Greek vowel quantities need to be determined from other types of information (notably, occurrences in verse, explicit statements of grammarians, certain kinds of misspellings, and so on).

One needs to keep in mind that a problem of several steps of transmission is involved here. First of all: “Ancient Greek authors of the classical, hellenistic and Roman periods wrote their works in scriptio continua, without accents and with very few punctuation signs. These were invented by scholars, first in

12- There might be a confusion of type (the word) and token (the particular occurrence of that word in some case form in a given context), which would explain BOISSEVAIN's otherwise puzzling claim that (the nom.sg.) Ἀνάτις occurs in Strabo: “Ἀνάτις Strabo (12, 3, 37 p. 559, ἀναείτιδος 11, 8, 4 p. 512, τῆς ταναίτιδος 11, 14, 16 p. 532 [...])”. (The pages BOISSEVAIN refers to are those of the edition CASAUBON 1620, who has Ἀνάτιδος for 12.3.37 like everyone else.) Since the accentual possibilities (and their implications, if any, for determining vowel length) differ between the different case forms (and in particular the accent of the genitive form, as noted, would not tell us anything about the vowel length), this seeming detail becomes the critical issue. The confusion might have been initiated by KORAĒS, who phrases his comment (1831: 450) on the Plutarch passage mentioned above in a way that might lead one to suppose that Strabo as well as Pausanias' *Description of Greece* (3. 16. 8) have the form Ἀνάτιν, saying “Γραπτέον Ἀνάτιν, ὡσπερ ἔδοξε καὶ τῷ Κλαυερῷ. Ἡ αὐτὴ γὰρ ἐστὶν ἦν καὶ Πανσανίας, καὶ Στράβων, Ἀνάτιν, ἣν Ἀνάτιδα καλοῦσιν” (“Read: Ἀνάτιν [scil.: in the Plutarch passage], as it also appeared to Clavier. For she is the one whom both Pausanias and Strabo call Ἀνάτιν or Ἀνάτιδα”). Again, this is in fact not so, since Pausanias has the genitive in the form Ἀναίτιδος (ROCHA-PEREIRA 1973: 241). KORAĒS' accusative may have been dictated by the syntax of his own Greek, and it is quite likely that he was concerned with the identification of the name itself, not with the particular case forms used by Pausanias and Strabo.

13- Besides those in Strabo, the only other occurrences of the name earlier than Plutarch are two quotes from Berossus (a Babylonian priest from the 4<sup>th</sup>/3<sup>rd</sup> century BC), one each related by Clement of Alexandria (ca. AD 200) and Agathias Scholasticus (6<sup>th</sup> c.) via other sources; these likewise have the obl. stem Ἀνάτιδ- / Ἀνάτιδ-, etc., saying nothing about the quantity of the *i* preceding the *t*.

14- Note that LOMMEL (1927: 27, 29f.) has a still different form of unclear origin, viz. Ἀνάτις (quoted by KELLENS 2003: 325). It is not clear either whether the form Anátis found in FACUNDO DE ZUBIRÍA (1860: 102) has something to do with LOMMEL's form.

hellenistic Alexandria, where Homer was the main beneficiary,<sup>15</sup> and generalised only after the introduction of the minuscule in the 9th century A.D. Modern editions of Homer, Herodotus or Aristotle all have word division, full accentuation and punctuation. For the accentuation the rules are laid down by the ancient grammarians, and modern editors follow, with few exceptions, the tradition of the Byzantine copyists” (CLARYSSE 1997: 177). The “accents” mentioned here refer to any diacritics (not just the accents proper but also the presence or absence of aspiration and the distinction between diphthongs and disyllabic vowel sequences).

As it happens, there even is an statement by Plutarch in which he explicitly voices his disdain for the use of the diacritics, specifically contrasting (*Platonic Questions* 10, XYLANDER 1624: 1009, BERNARDAKIS 1895: 147) “those [who] embellish the letters (by) putting (marks of) aspiration and nonaspiration as well as some (marks of) length and shortness on the letters” (and presumably also the accents, which must be included because of what follows), with “the Ancients being satisfied with the sixteen [sc. letters]”; he even compares the use of the diacritics to “the groans and shrieks of stage-players, and even their smiles and their [sc. dramatic] silences” (tr. ours). This appears to imply that in his time the writing of diacritics was known, but was not in general use – and adds to the argument that Plutarch himself would not have written or dictated any particular markings on AN(A)(E)ITIN.

Also, in the case of a proper name, and particularly a foreign one such as *Anaitis*, and one not discussed in any known Alexandrian work, whatever accentuation the manuscripts show would necessarily be of particularly doubtful authority. Indeed, modern editors have been largely arbitrary in dealing with this problem: “Keine Gewähr hat die von den Herausgebern schematisch durchgeführte Akzentuierung fremder Namen in Inschriften und Papyri” (SCHWYZER 1939: 395).

The philological problem highlighted here is of course by no means infrequent, and not just in Greek. Handbooks, dictionaries, and editions quite commonly quote forms whose status is doubtful at best. This may often be inevitable, and would not be problematic *if* these works also indicated in each case the basis for what they report. Unfortunately, that is very often not done, giving rise to ghost forms that then are taken for granted and perpetuated in the literature. In fact, critical editions have sometimes created ghost words based on a perceived need to settle on a single fully-spelled-out form by combining pieces of information of entirely different ontological status (that is, combining documented forms from a given text, forms from other texts, or coins or inscriptions, with emendations).

### 2.3. The input form for Greek again

One should also beware of assuming that there was a single way that a given foreign name was rendered by the Greeks. There is explicit testimony that in some cases the Alexandrine grammarians themselves disagreed, and there is no way to recover the true extent of variation in actual usage outside of the grammatical schools.

Indeed, Greek versions of Iranian names exhibit considerable variation.<sup>16</sup> A case in point is Artaxerxes, for which we find inter alia Ἀρταξέρξης, Ἀρτοξέρξης (Plutarch) and Ἀρταξέσσης (SCHMITT 1979: 61). It is not straightforward how to combine these with Manichean MP <’rdšyhr> on the one hand and Old Persian

15- Like Homer, some other authors likewise have a textual tradition going back to Alexandrine times; this obviously is not the case for later authors like Plutarch.

16- For Middle Persian, this is conveniently shown in the inscriptional material studied by BACK (1978: 151-157).

*Artaxšaça-* on the other. It seems that some contraction of the original form (perhaps *\*Arta-xšaθriya-*) took place in the prehistory of Middle Persian, yielding perhaps *\*xšaiθra-*.<sup>17</sup> The latter could quite well agree with the Manichean spelling and would also fit the Greek renderings Ἀρταξίρ, Ἀρταξείρ (vs. genitive Ἀρταξάρου for Ardašir I) in the Greek versions of the Sasanian inscriptions (whose MP version has the archaising <’rtštr>) as well as Ἀρταξήρ, Ἀρτασήρ, Ἀρδεσήρ, Ἀρτασ(ε)ίρης attested in Byzantine sources (SCHMITT 1979: 68). Another contraction seems to be at the root of the Armenian form *Artasēs*, which is rendered as Ἀρταξίτας, Ἀρτάξας, later on also Ἀρτάξης (SCHMITT 1979: 63f.).

The considerable variation in this royal name is pertinent because it sheds light on the name in question: It seems likely that modern scholarship has preferred *\*Ἀναίτις* in order to bring it in line with its Iranian origin, specifically Avestan *Anāhitā*. However, this form might actually not even be expected to be reflected in Greek: The Ir. input for the Greek could quite well have shown some contraction as we see for Artaxerxes; it seems not entirely impossible that *\*Anāhitā* was pronounced *\*[anēita]* or so in the Ir. variety which was the source for the Greek. Indeed, as pointed out by HOFFMANN (1976: 624, 644), it is only Elamite that can be trusted to reflect Old Iranian directly, while any Greek data is likely to mirror a later stage, and/or to have come via third languages.

Concerning the Ir. source, the only Old Persian inscriptions containing the name are rather late (by Artaxerxes II).<sup>18</sup> There is <a-n-h-i-t> in A<sup>2</sup>Sd, which does not say anything since vowel length of *i* and *u* is not distinguished in Old Persian (both being noted by <i>, <u>, preceded by a sign <C<sup>i/u</sup>> where available). The other instances are noteworthy in noting <a-n-h-t> (A<sup>2</sup>Sa [several copies] and A<sup>2</sup>Ha). These forms may reflect *Anāhata*, with a change of *hi* to Old Persian *hə* suggested by HOFFMANN (1976: 642f.),<sup>19</sup> and neutralization of quantity of word-final vowels.<sup>20</sup> The Elamite version of the inscription A<sup>2</sup>Sa has *an-na-hi-ud-da* (HINZ & KOCH 1987/I: 60), which might likewise speak for a short vowel since for a long one might perhaps have chosen a sign *iC* rather than *ud*. Old Persian thus does not provide evidence for a long *ī* that might have been an input for Greek, rather to the contrary.

106

## 2.4. Conclusion

There is no Iranian and certainly not Greek-internal evidence to tell us that Plutarch or any other ancient author wrote, or dictated, a form with -AI- or -αί-.

In the light of all this, the explanation advanced by KORN (2009: 207) to account for a potentially troublesome *\*Ἀναίτις*- (the supposed Greek reflex of Iranian *\*Anāhitā*- with a lengthened /ī/ before a still voiceless /t/)<sup>21</sup> is superfluous because the alleged Greek form dissolves into nothingness on closer inspection.

17- See SUNDERMANN and SIMS-WILLIAMS *apud* BOYCE (1990: 7f. note 7) and KORN (2009: 203) for discussion.

18- Artaxerxes II (reigned first half of 5<sup>th</sup> c. BC).

19- HOFFMANN does not mention this name, though.

20- Cf. also SCHMITT (1999: 73, 81) and KORN (2021).

21- The suggestion was that an input form *\*Anāhit* was influenced by Middle Persian *Anāhīd*, and/or potentially by *\*\*Anāhit*. The latter would be a hypothetical learned form such as one commonly finds in names, which are frequently re-borrowed from classical languages and sometimes coexist with the inherited forms, cf. e.g. contemporary Persian first names such as artificial *Zar(ā)tošt*, *Mitrā*, *Dāryūš* besides the regularly developed forms *Zardošt*, *Mehrī*, *Dārā*, etc.

### 3. The discrepancy between *i/u* and *a*

#### 3.1. The Iranian data

Another question that remained unresolved in KORN 2009 was the curious difference in the treatment of Old Ir. *i* and *u* vs. *a*: While one might expect that “the natural tendency of speakers to assign part of the voicing of the consonant to the preceding vowel” cited in Section 1. should operate for any short vowel, short *a* is not affected by the change that lengthens short *i* and *u*. For instance, the vowel in Old Ir. *\*-aka-* is not lengthened, yielding the extremely common MP nominal suffix *-ag* while *\*-ika-* and *\*-uka-* yield the MP adjective suffixes *-īg*, *-ūg*; and *āmad* ‘came’ shows a short *-ad* vs. the long vowels in the parallel past stems *-īd*, *-ūd*. (< *\*i/uta-*).

There might be a morphological motivation for this difference (KORN 2009: 208): Had *\*-aka-* resulted in MP *†-āg*, it would have been homonymous with the suffix *-āg* of the present participle, while the adjective suffix *-īg* < *\*-ika-* rather conveniently coalesced with the functionally identical suffix *-īg* < *\*-iyaka-*; this in turn maybe provided another motivation for the change in *-ūg* < *\*-uka-*. Similarly, the past stem suffixes *-īd* and *-ūd* going back to *\*i/uta-* happened to agree with the functionally identical past stem of roots in *\*-H*, e.g. the particularly common *dīd* ‘saw’ (< Proto-Ir. *\*diH-ta-*) and *būd* ‘became, was’ (< *\*buH-ta-*).

#### 3.2. Phonetic data

While these factors may quite well have played a role, phonetic data have come to my attention which suggest that high and low vowels may indeed be treated differently in lengthening processes.

Firstly, a number of languages of Europe (not only from the Indo-European family) show a difference in vowel duration depending on height (with low vowels being longer than high ones) while front- vs. backness does not yield such a difference (NEWKLOWSKY 1975: 38, 40). Obviously, vowel length is also influenced by the phonetic context and by the number of syllables of a given word form, but in all cases, there is a length difference between low and high vowels (LISKER 1974: 228), even in whispered speech (NEWKLOWSKY 1975: 40, 53). Also, the intrinsic pitch (fundamental frequency,  $F_0$ ) of low vowels is lower than that of high ones; and the specific sonority (intensity) of low vowels is likewise greater than that of high ones (NEWKLOWSKY 1975: 39).

There is thus solid evidence for a correlation of vowel height and length, even if the precise articulatory mechanisms behind these factors have been much debated.

JILKA & MÖBIUS 2007, studying a corpus of standard German to gain “insights into the phonetic realisation of prosodic categories” (p. 2621), contribute additional data which point to vowel height being relevant in lengthening processes. Examining the impact of various factors on peak alignment, i.e. the time point when the peak (the maximum of the  $F_0$  contour) occurs within the syllable, they find that vowel height correlates with duration and peak position of accented vowels.<sup>22</sup> This is a noteworthy result because vowel height has not usually been held to affect peak alignment. Furthermore, factors such as vowel front-

22- In their sample, the peak position for high vowels is at 41.8% of the duration of the syllable vs. 30.9% for low vowels, and the mean duration of the syllable is 93 ms for high vowels vs. 139 ms for low ones. Both differences are statistically significant (p. 2622f.).



/ backness and syllable structure do not have an effect on peak alignment in their data.<sup>23</sup> For instance, while stressed syllables have a later peak than unstressed ones, there is no particular difference between accented vs. unaccented high and low vowels that might account for the effect on peak position triggered by vowel height (p. 2623).

We thus find the apparently conflicting evidence of low vowels being longer, and of having their peak earlier than high ones, but the two factors are not in a causal relation: vowel duration turns out not to be the cause of peak position. Crucially, the known fact that the intrinsic pitch of high vowels is higher than that of low ones might be connected to peak alignment: JILKA & MÖBIUS 2007 suggest that the higher intrinsic pitch of high vowels could take longer to reach.

So far as the phonetic context is concerned, vowels preceding voiced consonants are longer generally than those preceding voiceless ones (see Section 1.), but here as well, the phonetic details have been subject to much discussion (LISKER 1974: 228f.). Again, vowel height might play a role: MÖBIUS 2009, following up on his earlier studies on German vowels, investigates vowels preceding voiced stops, and finds a higher tendency for high vowels preceding voiced stops to be lengthened than for low ones.

### 3.3. Conclusion

The data just presented give at hand that there is evidence (1) of a difference between high and low vowels in terms of peak alignment and length, with a tendency for low vowels to be longer than low ones, and (2) of this tendency operating in different contexts, including the one preceding voiced stops.

Needless to say, the contemporary languages studied in recent phonetic research do not need to imply anything for Middle Persian at the time when the sound change in (1) operated. I do argue, though, that they open up the possibility that similar differences in the behaviour of high and low vowels may obtain cross-linguistically, and offer a parallel to the difference suggested as having operated in Middle Persian.

---

23- The apparent difference in peak position between tense vs. lax vowels that has been noted previously turns out to be a secondary effect of closed vs. open syllables, and indeed peaks are regularly later in open syllables than in closed ones (pp. 2621f., 2623). Similarly, there is apparently an earlier peak for central vowels on the one hand and front and back vowels on the other, but the problem here is that “central vowels” include vowels such as ə, which only occur in unstressed positions in German, i.e. the effect observed is one of the impact of vowel height blurred by the effects of stress (p. 2622).

## Bibliography

- Back, Michael. 1978. *Die sassanidischen Staatsinschriften* (Acta Iranica 18). Leiden: Brill.
- Bartholomae, Christian. 1904. *Altiranisches Wörterbuch*. Straßburg: Trübner.
- Bernardakis, Gregorius N. 1885. *Plutarch. Moralia*, 6. Leipzig: Teubner.
- Boissevain, Ursul Philip. 1895. *Cassii Dionis Cocceiani Historiarum Romanarum quae supersunt edidit Ursulus Philippus Boissevain*, 1. Berlin: Weidemann.
- Boyce, Mary. 1990. Mithra Khšathrapati and his brother Ahura. *Bulletin of the Asia Institute* 4. 3-9 (Aspects of Iranian Culture: Festschrift for Richard Nelson Frye).
- Casaubon, Isaac. 1620. *Strabonis Rerum Geographicarum libri XVII, Isaacus Casaubonus recensuit (...)*. Paris: Typis Regiis.
- Clarysse, Willy. 1997. Greek accents on Egyptian names. *Zeitschrift für Papyrologie und Epigraphik* 119. 177-184.
- Clavier, Etienne. 1802. *Les vies des hommes illustres de Plutarque, traduites du grec par Amyot, Grand-Aumônier de France; avec des notes et des observations, par MM. Brotier et Vauvilliers. Nouvelle édition, revue, corrigée et augmentée, par E. Clavier*, 8. Paris: Cussac.
- De Jong, Albert. 1997. *Traditions of the Magi: Zoroastrianism in Greek and Latin literature*. Leiden etc.: Brill.
- Fabricius, Johann Albert & Hermann Samuel Reimar. 1752. *Τῶν Διωγῶν τοῦ Κασσίου τοῦ Κοκκηλιαίου Ῥωμαϊκῶν ἱστοριῶν τὰ σωζόμενα: Cassii Dionis Cocceiani Historiae Romanae quae supersunt I (Quod complectitur Fragmenta Librorum I – XXXV cum Annotianibus Maxime Henrici Valesii Libros XXXVI – LIV Integros cum Annotationibus Ioannis Alberti Fabricii ac Paucis Aliorum*. Hamburg: Sumptibus Christiani Heroldi.
- Facundo de Zubiría, José. 1860. *El principio religioso como elemento político, social y doméstico*. Paris: Imprenta de J. Claye.
- Gotō, Toshifumi. 2000. Vasiṣṭha und Varuṇa in RV VII 88. Priesteramt des Vasiṣṭha und Suche nach seinem indoiranischen Hintergrund. In Bernhard Forssman & Robert Plath (eds.), *Indoarisch, Iranisch und die Indogermanistik. Arbeitstagung der Indogermanischen Gesellschaft vom 2. bis 5. Oktober 1997 in Erlangen*, 147-161. Wiesbaden: Reichert.
- Hinz, Walther & Heidemarie Koch. 1987. *Elamisches Wörterbuch* (Archäologische Mitteilungen aus Iran. Ergänzungsband 17). Berlin: Reimer, 2 vol.
- Hoffmann, Karl. 1976. Zur altpersischen Schrift. In *Aufsätze zur Indoiranistik II*, 620-645. Wiesbaden: Reichert.
- Jasanoff, Jay. 2004. *Plus ça change...: Lachmann's law in Latin*. In John H.W. Penney (ed.), *Indo-European perspectives. Studies in honour of Anna Morpurgo Davies*, 405-416. Oxford / New York: Oxford University Press.
- Jilka, Matthias & Bernd Möbius. 2007. The influence of vowel quality features on peak alignment. In *Proceedings of Interspeech 2007 (Antwerpen)*. 2621-2624.
- Kellens, Jean. 2003. Le problème avec Anāhitā. *Orientalia Suecana* 51-52. 317-326 (Festschrift for Bo Utas and Gunilla Gren-Eklund).
- [Koraēs, Adamantios] 1813. *Πλουταρχου βιοι παραλληλοι, οἷς προσετέθησαν σωμαιώσεις, καὶ τῶν Αὐτοσχεδίων στοχασμῶν περὶ τῆς Ἑλληνικῆς παιδείας καὶ γλώσσης ἀκολουθία [...]* V. Paris: Everart.

- Korn, Agnes. 2009. Lengthening of *i* and *u* in Persian. In Almut Hintze, François de Blois & Werner Sundermann (eds.), *Exegisti monumenta. Festschrift in honour of Nicholas Sims-Williams* (Iranica 17), 197-213. Wiesbaden: Harrassowitz.
- Korn, Agnes. 2021. Contributions to a relative chronology of Persian: The non-change of postconsonantal *y* and *w* in Middle Persian in context. *Indo-European Linguistics* 9.
- Lisker, Leigh. 1974. On "Explaining" vowel duration variation. *Haskins Laboratories: Status Report on Speech Research* SR-37/38. 225-232.
- Lommel, Herman. 1927. *Die Yäšt's des Avesta* (Quellen der Religionsgeschichte 15). Göttingen: Vandenhoeck & Ruprecht.
- Mayhoff, Karl. 1906. *C. Plini Secundi Naturalis historiae libri XXXVII* [...], I. Stuttgart & Leipzig: Teubner (repr. Stuttgart & Leipzig: Teubner 1996).
- Mayrhofer, Manfred. 1973. *Onomastica Persepolitana. Das altiranische Namengut der Persepolis-Täfelchen* (Veröffentlichungen zur Iranistik 1). Vienna: Österreichische Akademie der Wissenschaften.
- Möbius, Bernd. 2009. "Corpus-based analysis of prosodic and segmental features influencing F<sub>0</sub> peak alignment" (presentation held at Frankfurt University 28 April 2009).
- Neweklowsky, Gerhard. 1975. Spezifische Dauer und spezifische Tonhöhe der Vokale. *Phonetica* 32. 38-60.
- Oettinger, Norbert. 2001. Das Benennungsmotiv der iranischen Göttin Anāhitā (mit einer Bemerkung zu ved. Aditi). *Münchener Studien zur Sprachwissenschaft* 61. 163-167.
- Pape, Wilhelm & Gustav Benseler. 1911. *Wörterbuch der griechischen Eigennamen*. Braunschweig: Vieweg, 3<sup>rd</sup> edn., 2 vol.
- Radt, Stefan. 2002-2011. *Strabons Geographika: mit Übersetzung und Kommentar*. Göttingen: Vandenhoeck & Ruprecht, 10 vol.
- Robinson, E.S.G. 1921. Greek coins from the Dardanelles. *Numismatic Chronicle* ser. 5, v. 1: 1-26 (+ Plate I).
- Rocha-Pereira, Maria Helena. 1973. *Pausaniae Graeciae Descriptio* I. Leipzig: Teubner.
- Schmitt, Rüdiger. 1979. Artaxerxes, Ardašir und Verwandte. *Incontri Linguistici* 5. 61-72.
- Schmitt, Rüdiger. 1999. *Beiträge zu altpersischen Inschriften*. Wiesbaden: Reichert.
- Schwartz, Martin. 2006. The Hymn to Haoma in Gathic transformation: Traces of Iranian poetry before Zarathushtra. In Antonio Panaino (ed.), *The Scholarly contribution of Ilya Gershevitch to the development of Iranian studies*, 85-106. Milano: Mimesis.
- Schwyzler, Eduard. 1939. *Griechische Grammatik: auf der Grundlage von Karl Brugmanns griechischer Grammatik*. I: Allgemeiner Teil, Lautlehre, Wortbildung, Flexion. Munich: Beck.
- Sintenis, Carolus. 1860. *Plutarchi vitae parallelae*, 5. Leipzig: Teubner.
- Xylander, Wilhelm. 1624. *Plutarchi Chaeronensis Omnium quae exstant operum tomus secundus, continens Moralia*. Paris: Typis Regiis.
- Ziegler, Konrat & Hans Gärtner (eds.). 1996. *Plutarchi vitae parallelae* III.1. (Stuttgart &) Leipzig: Teubner.

## Contents

### Articles

- |    |   |     |
|----|---|-----|
| 1  | Alisher Begmatov: Two Sogdian Toponyms in Arabic and Chinese Sources, and their Attestation as Commodity Terms in Sogdian and Uyghur Economical Documents | 1   |
| 2  | Alberto Cantera: Avestan texts in context (2): the <i>Nērang ī ātaxš abrōxtan</i> and the “eternal fire”  | 7   |
| 3  | Henry P. Colburn: A Parthian Shot of Potential Arsacid Date   | 35  |
| 4  | Omar Coloru: The city of brotherly love. The language of family affection in the Artaxiad dynasty between the Hellenistic and the Parthian world          | 41  |
| 5  | Majid Daneshgar: Persianate Aspects of the Malay-Indonesian World: Some Rare Manuscripts in the Leiden University Library                                 | 51  |
| 6  | Charles G. Häberl: <i>priuš</i> and <i>zur</i> : Two Transliteration Artifacts in the Mandaean <i>Great Treasure</i>                                      | 79  |
| 7  | Charles W. King: The Hunnic attack on Persia: Chronology, context, and the accounts of Priscus and Thomas   | 85  |
| 8  | Agnes Korn: Notes on a Middle Persian sound change: Greek Ἀνάτις and features of vowel length   | 101 |
| 9  | D. T. Potts: The spurious fifth century date for the cultivation of sugar cane ( <i>Saccharum officinarum</i> ) in Khuzestan                              | 111 |
| 10 | Hossein Sheikh: From Mesopotamia to Khotan: Payment clauses in Eastern Middle Iranian languages and their historical backgrounds                          | 118 |
| 11 | محمد توکلیان: یک امپراطورِ ناشناخته در نقش برجسته شاپور یکم ساسانی: تنگ چوگان؛ بیشاپور ۳  | 137 |

### Reviews

- |    |  |     |
|----|--|-----|
| 12 | Hossein Sheikh: Scheunchen, Tobias. <i>Cosmology, law, and elites in late antiquity: Marriage and slavery in Zoroastrianism, Eastern Christianity, and Islam</i> (Arbeitsmaterialien zum Orient 32). Baden-Baden: Ergon Verlag, 2019. 144 pages. ISBN-13: 978-3956504679. 32,00 €. | 160 |
| 13 | Sun Wujun: Review of Ge, Chengyong [葛承雍]. <i>Hu Han Zhongguo yu Wailai Wenming</i> 胡漢中國與外來文明 [Han and Hu: China in Contact with Foreign Civilizations]. Beijing, Sanlian Shudian, 2019. 5 vols. (in Chinese with English abstract)   | 163 |

