# History of Science in South Asia



# The Borrowings Kṣuta-/kṣut- ("Inimical") and Vidumāla-("Retrograde") in Sanskrit Astrological Texts and the Representation of Semitic 'ayn in Similar Loans

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Volume 10, 2022

URI: https://id.erudit.org/iderudit/1094219ar DOI: https://doi.org/10.18732/hssa85

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Publisher(s)

University of Alberta Library

**ISSN** 

2369-775X (digital)

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## Cite this article

Wikander, O. (2022). The Borrowings Kṣuta-/kṣut- ("Inimical") and Vidumāla- ("Retrograde") in Sanskrit Astrological Texts and the Representation of Semitic 'ayn in Similar Loans. *History of Science in South Asia*, 10, 272–283. https://doi.org/10.18732/hssa85

# Article abstract

This short article deals with the etymologies of two Perso-Arabic loans that function as technical terms in Tājika (Indian astrology imported from the Perso-Arabic cultural area), both appearing in the works of the 13th century CE astrological author Samarasimha. The terms are ksuta-/ksut- ("Inimical") and vidumāla- ("Retrograde") - the meanings of both have been clear for some time, but the article elucidates their exact etymologies, and uses them to argue a rather complex mode of scientific/scholarly transmission, possibly involving as many as four languages: Arabic, Persian, Old Gujarati (or other northern Indo-Aryan vernaculars of the time), and finally Sanskrit. Finally, the article discusses the renderings of the voiced pharyngeal fricative in loans of this type in the light of early Modern Persian orthography and phonology.

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MLA style citation form: Ola Wikander. "The Borrowings *Kṣuta-/kṣut-* ("Inimical") and *Vidumāla-* ("Retrograde") in Sanskrit Astrological Texts and the Representation of Semitic <sup>c</sup>ayn in Similar Loans." *History of Science in South Asia*, 10 (2022): 272–283. DOI: 10.18732/hssa85.

# HISTORY OF SCIENCE IN SOUTH ASIA

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia, published online at <a href="http://hssa-journal.org">http://hssa-journal.org</a>

ISSN 2369-775X

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The electronic versions were generated from sources marked up in LateX in a computer running gnu/linux operating system. PDF was typeset using XaTeX from TeXLive. The base font used for Latin script and oldstyle numerals was TeX Gyre Pagella developed by gust, the Polish TeX Users Group.

# The Borrowings *Kṣuta-/kṣut-* ("Inimical") and *Vidumāla-* ("Retrograde") in Sanskrit Astrological Texts and the Representation of Semitic <sup>c</sup>ayn in Similar Loans

# Ola Wikander

Lund University and the Swedish Collegium for Advanced Study

T Sanskrit technical terms employed in so-called Tājika astrology, i.e., Medieval Perso-Arabic astrology in Indian reception. Both are used by the same author, the great instigator of Sanskrit Tājika tradition, Samarasiṃha. One of them is used in a quotation in another work and the other in his own preserved text "Light on Action" ( $Karmaprak\bar{a}\hat{s}a$ ). The meaning of both words in their contexts is quite clear, but their etymologies have so far escaped elucidation. The fact that a background in Arabic and/or Persian is probable has also been apparent, but the exact etyma have not previously been pinned down. After discussing the etymologies of these words, I will also analyze certain patterns of phonological substitution in the Perso-Arabic loans into Sanskrit astrological texts, specifically their renderings of the Arabic pharyngeal sounds.

# THE GAZE OF AN ENEMY: KSUTA-

The first term for discussion is  $k \sin ta$ — (which also exists in the variant form  $k \sin t$ —/ $k \sin t$ —), occurring in the works of thirteenth century ce astrological author Samarasimha as a description of negative planetary aspects. Samarasimha says of the term, after describing the sometimes so-called "hard" and potentially dangerous astrological aspects of square, opposition, and conjunction:<sup>2</sup>

pendious work *Hāyanaratna*, finished in 1649. For the date of Balabhadra's work, see Gansten 2020: 16; that volume forms the standard edition of the text.

<sup>1</sup> This variant version occurs, e.g., in the work of the later author Nīlakaṇṭha.

<sup>2</sup> This is found in a text which was quoted by the later author Balabhadra in his com-

[...] tisro 'ridrśah ksutākhyāh syuh/3

The three inimical aspects [in question] are to be referred to as *kṣuta*-.

Thus far, this word has defied explanation; it is certainly not a native Sanskrit lexeme: the only known Sanskrit root that could theoretically have given rise to such a form is *kṣu*- ("to sneeze"), not exactly a perfect fit, as pointed out by Gansten (2018: 165, n. 11). Gansten (2020: 163, n. 3) also points out that the etymology is hitherto unknown. There is also a noun *kṣuta*- meaning "black mustard", but that, too, seems less than relevant here. A root *kṣud*- ("strike") does exist, but this could hardly create a form *kṣuta*-, nor does it fit the context. The same goes for *kṣudh*- ("hunger"). Thus, and quite logically given the origin and contents of the text, it is to the Perso-Arabic cultural background of the material that we must turn. And here, I believe, there is a solution.

The basis for the strange Sanskrit form is in fact to be found in the Arabic root hsm, which has to do with "being hostile" or "contending".<sup>4</sup> This root forms an abstract noun hsm, meaning something in the region of "(an act of) hostility, dispute",<sup>5</sup> which was subsequently borrowed into Persian as hsm, meaning with the typically Persian rendering of  $t\bar{a}$   $sm, marb\bar{u}$  as -at (a matter to which we will be returning later on).<sup>6</sup>

What appears to have happened is that Samarasiṃha (or some source of his – see further below) borrowed this Persianized word into Sanskrit, in the process reducing the first -u- to some sort of schwa, which probably only seemed like an anaptyctic vowel. This would yield \*k sumat (if one disregards the quantity of the second vowel), after applying the normal retroflexion of the sibilant after a velar. Here, the different uses of the transliteration sign s (emphatic in Arabic, retroflex in Sanskrit) must be borne in mind: the fact that a "dotted s" appears in both versions of the word is a coincidence.

Note that the uvular or velar fricative kh/h, which would normally have been rendered or substituted using an aspirated velar kh in Sanskrit, was deaspirated

<sup>3</sup> Hāyanaratna 2.1. Text follows Gansten 2018: 165, n. 11 and Gansten 2020: 162 (with his translation, from which my own differs very little, on the facing page, p. 163). I have now been informed by a reviewer that a (hitherto unedited) manuscript of Samarasiṃha's original text (the one from which Balabhadra quotes), dated to 1808, has recently come to light, and that the line here discussed is, indeed, present therein. An edition of the manuscript is said to be forthcoming.

<sup>4</sup> For the verbal root itself, see Lane 1863:751, translating the basic stem thereof

as "He contended in an altercation, disputed, or litigated, in a valid, or sound, manner." Stem VIII of the root is translated (in the 3rd plural) as "They contended in altercation, disputed, or litigated, one with another." The nominal derivation hasm- is defined as "An adversary in contention or altercation, in dispute, or in litigation; an antagonist; a litigant."

<sup>5</sup> Lane (1863:752) defines it as "Contention or altercation: disputation: litigation."

<sup>6</sup> For the Persian word, see Steingass 1892: 464.

in front of the sibilant, a very understandable development, as the aspiration would have been more or less undetectable (a "collision of sounds" only made possible due to the deletion of the vowel in the first syllable, itself logical, as *kṣ*-is a very common phonotactic structure in Sanskrit; again, the retroflexion of the sibilant is quite logical, given that it appears after a *k*- and before an -*u*, the classical position of the RUKI sound structure in Sanskrit – a simple *s* would have been highly remarkable and strange).

Given the tendency in New Indo-Aryan times not to take heed of the inherent *a* vowel of the Brahmi-derived signs (a tendency shown by many Perso-Arabic borrowed words in the Tājika corpus), this would have been alternatively interpreted as \*kṣumta or \*kṣumt (at least in the spoken language). From this, what probably happened is that the nasal was written as an anusvāra – \*kṣuṃt(a). Loss of the anusvāra dot is a common occurrence both in handwritten and printed texts, and so, we arrive at kṣuta- or kṣut-. Thus, the term kṣud-dṛṣṭi or kṣuta-dṛṣṭi should be etymologically interpreted as "hostile aspect", which fits exactly with the context. Note that Samarasiṃha explains the word quite literally as ari-dṛś- ("enemygaze, inimical aspect"), showing that he was well aware of the etymologically correct meaning of the term. One may also imagine some folk-etymological interference from the native Sanskrit word kṣudra- ("small, insignificant, bad, wicked," etc.) and possibly from the verbal root kṣud- ("strike") mentioned earlier. The latter influence may have been especially relevant in the subsequent creation of the later version kṣut-.7

All in all, the following steps would have been passed through to arrive at the attested Sanskrit form:

- 1. Arabic *huṣūma* was borrowed into Persian as *khuṣūmat*.
- This word was borrowed into Sanskrit (and, presumably, into the New Indo-Aryan speech of the borrower), reducing the first vowel to fit well with Sanskrit phonotactics.
- 3. The aspiration of the initial velar that would have been part of the natural substitution for a velar/uvular fricative disappeared before the sibilant, yielding something like \*kṣumat.
- 4. Interference from spoken New Indo-Aryan and/or from ambiguous spelling practices led to *schwa*-deletion and/or lack of clarity as to which *a*-s were to be pronounced, leading to \*kṣumt(a), or spelled with an anusvāra, \*kṣuṃt(a).
- 5. This *anusvāra* dot was lost (as often happens) somewhere in the textual transmission, while the word was partly (but not always) reinterpreted as

<sup>7</sup> This would make the word at least a partial example of the phenomenon known

as "phono-semantic matching" (cf. Zuckermann 2003: 34–37).

- a Sanskrit past passive participle, yielding *kṣuta-* or *kṣut-* as the attested stems.
- 6. The word was possibly associated with some existing, native vocabulary.

The question of whether the anusvāra was lost on the way to Samarasimha or after him must be given the former answer; this is due to metrical reasons. The phrase quoted above, tisro 'ridrśah ksutākhyāh syuh, is the last pāda of a strophe in the āryā meter, and such a strophe should consist of 15 morae (which, indeed, it does, the last syllable in a pāda conventionally counting as heavy, i.e., as two morae). However, if Samarasimha had originally written the relevant word with an anusvāra (i.e., \*\*kṣuṃtākhyāh), the pāda would have become unmetrical, as the sequence (...)umt(...) would have produced a new heavy syllable, thus counting as two morae instead of one (making the whole add up to 16 instead of 15).8 Thus, we must presuppose that Samarasimha "received" (or at least chose to write) the word without anusvāra, suggesting that this word, at least, has an earlier history in Sanskrit writing – interesting, as Samarasimha was the earliest major Sanskrit author of Tājika, and mentioned as the translator of Perso-Arabic works into Sanskrit by Balabhadra. One should not discount the possibility that the earlier Sanskritization with a subsequently lost anusvāra was by Samarasimha himself (or some bilingual person close to him), before he actually wrote the quoted passage.

As supporting evidence for the above interpretation, there is a close parallel to the phonological development of another Perso-Arabic loan in Tājika – the name of one of the sixteen planetary configurations or *yogas* that form one of the most defining characteristics of this school of astrology. This list has been previously extensively discussed and analyzed.<sup>10</sup> It includes the entry known as *kuttha-*, which is derived from Perso-Arabic *quwwat* (strength).<sup>11</sup> The parallel is rather striking when the two word pairs are shown together:

Quwwat – kuttha-Khusūmat – ksuta-

Note how both loans have simplified the moraically complex -uw- and  $-\bar{u}$ - to a short u (the former one does include a gemination, though).

<sup>8</sup> I would like to thank Martin Gansten for discussing the metrics of the strophe with me.

<sup>9</sup> For the data on this, see Gansten 2020: 7. Cf. also the discussion of Pingree's earlier theories on p. 9, which did postulate an earlier Sanskrit work, but with rather different and not entirely persuasive

argumentation.

<sup>10</sup> Gansten and Wikander 2011; Gansten 2020: 23–26.

<sup>11</sup> Note that the Persianized form *quvvat* is attested already in one of the earliest New Persian texts written with Arabic script in existence, the Codex Vindobonensis, MS Vienna ÖN A.F. 340 (Orsatti 2019: 53).

The main phonological difference between the two lies in the former Sanskrit word showing an aspirated dental stop and the latter an unaspirated one; this discrepancy is, however, less strange than one might think. Since *kṣuta-* is, in effect, used as a sort of adjective by Samarasiṃha, it is only logical that he would map the loan onto the extremely common pattern of the past passive participle in *-ta*. To Samarasiṃha, then, the word would probably have parsed as something like "enemy-ized."

There is internal, semantic support for this interpretation in the traditions underlying the Tājika literature, as well. This is the sahm al-huṣūmāt wa-l-muḥāṣimīn, the name of one of the so-called "lots" or "parts" that formed a major part of Perso-Arabic astrology<sup>12</sup> – the concept of the sahm was also imported into Tājika using the transparent loanword sahama. Said "part" includes not only the word husūmāt - the plural of the above-mentioned word husūma itself - but also another derivative of the same root, the oblique plural muḥāṣimīn, giving the combined translation "Part of enmities/hostilities and enemies." The existence of this "part" shows clearly that the root *lism* – and specifically the Arabic word huṣūma itself – were in use in the astrological context from which the Tājika authors drew.<sup>13</sup> Somewhat surprisingly, this root is not normally used for inimical aspects specifically in the Arabic-language sources, even though the name of the part in question does show it to be part of the astrological vocabulary underlying the Tājika terminology. For example, Sahl ibn Bishr's introduction to astrology, which discusses inimical aspects and the strife that they create – and which was apparently one of the most important, if not the most important, sources for Indian Tājika – 14 does not use this specific term to describe them, but different ones.15

<sup>12</sup> The "lots" or "parts," a concept going back to Hellenistic astrology, are mathematically calculated points in a horoscope, believed to be related to a specific area of life; typically, they are calculated by measuring the distance in zodiacal longitude between two planets (in the astrological sense) and subsequently extending that distance from the Ascendant.

<sup>13</sup> On the sahm al-ḫuṣūmāt wa-l-muḫāṣimīn, see Gansten 2018: 99 (he translates it as the "lot of disputes and opponents"), and mentions that it appears in Abū Macšar's Kitāb al-Mudḥal VIII 6, 49, and that its descendant in Tājika is, somewhat counterintuitively, the "lot of forbearance or forgiveness" (with reference to Nīlakaṇṭha's Samṭjāātantra 3.13).

<sup>14</sup> As demonstrated by Gansten and Wikander (2011) (and partially presaged by

Weber (1853: 266–267)). For an introduction to Sahl and his works, see, e.g., Sezgin 1979: 125–128.

<sup>15</sup> The Arabic text of Sahl's Kitāb al-aḥkām 'alā an-nisba al-falakīya has not been edited; however, it is supported in MS London BL Or 12802, which is available in facsimile online at the Qatar Digital Library, maintained by the Qatar National Library (ibn Bishr 1682), and I have consulted this text. The relevant material on inimical aspects can be found in pp. 19–20 of the manuscript. A translation of the Latin version of the Introductorium (as it is often known in that language) can be found in Holden 2008. The text has also been translated by Benjamin Dykes – once from the Latin (Dykes 2008) and once from the Arabic (Dykes 2019).

This – together with the -at at the end of the word and the linguistic deformation of the term – suggests to me that Samarasimha or his source got this word not directly from an Arabic-language source (specifically, not from Sahl's text itself), but from a speaker, most probably of Persian. This is supported by the fact that the Persian version of the word, khusūmat, can refer to enmity in a general sense, whereas the original Arabic term is specifically tied to litigation as its setting (see footnotes 4 and 5; this is one important sense in Persian as well, but Steingass's dictionary also mentions declarations of war and general "animosity" – see footnote 6 for the reference). And, as mentioned, the rendering of  $t\bar{a}^{\sigma}$  mar $b\bar{u}ta$  as -at also points in this direction. Another sign of speech being involved is the deletion of the first vowel of the word (from \*khusu- to Sanskrit ksu-), which would seem to demand a spoken transmission at some stage. Thus, the origin of Samarasimha's term would probably not have been direct textual dependency on an Arabic-language text but rather a Persian-language intermediary. <sup>16</sup> As an additional possibility, one could imagine a Persian-language compendium of Perso-Arabic astrological doctrine, from which Samarasimha drew.<sup>17</sup> These two explanations are certainly not mutually exclusive: one may well imagine a situation with both a compendium and a "middle man" explaining it.

# BACKWARDS INTO THE FUTURE: VIDUMĀLA-

The second term to be analyzed in this article is <code>vidumāla-</code>, used in one single place in the <code>Karmaprakāśa</code> of Samarasiṃha, apparently in the sense of "retrograde" (against the direct motion of the planets). This word certainly has no inner-Sanskrit etymology; it is, in fact, derived from the Persian word <code>dunbāl</code>, "tail, rear, back", which fits well with the meaning of the word in the context: a planet moving backwards, with its rear into the future, as it were.

One could well imagine that the original (Persian?) expression included the preposition ba- ("in, to, by"), or perhaps even more likely the directional ("to")  $b\bar{e}/bi$ , "which was subsequently reinterpreted and re-etymologized in Sanskrit

<sup>16</sup> See the similar argument by Gansten and Wikander (2011: 545).

<sup>17</sup> Cf. the suggestion of an early, and now lost, compendium made by Gansten (2012: 313; 2020: 9) (including doctrines both from Sahl and al-Kindī), a compendium that would have served as a source for Samarasimha. This, Gansten argues, would be the reason for Samarasimha attributing many of his doctrines demonstrably received more or less verbatim from Sahl to a certain *Khindi* or *Khindika*. Gansten suggests in his 2012 article a compendium in Arabic; given the data discussed here, Persian

is certainly also a possibility. Interestingly, Balabhadra says that Samarasimha gained his doctrines from a text written in "the Persian language" (pārasyā bhāṣayā; Gansten 2020: 7, 79). Gansten notes that one need not presuppose that Balabhadra knew the difference between Arabic and Persian, and with this I agree – however, the kṣuta- word does, indeed, seem to work best with a Persian Vorlage, whether only spoken or written as well.

<sup>18</sup> For these prepositions and their renderings, see Orsatti 2019: 54, 62.

as representing the negative/separative *vi*-. This would be especially probable given the common confusion of /b/ and /v/ in Northern India, both in writing and sometimes in pronunciation.<sup>19</sup> If this is so, it would, in effect, mean that the Sanskrit borrowing involved an additional layer of interpretation – one signifying "unnaturalness" or "movement away" (more or less like German *zer*-) from the ordinary motion of the planet in question. This would imply that the Sanskritized borrowing ended up as more than its original parts, so to speak, creating a word meaning "moving non-normally in a backwards fashion." Samarasimha (or his immediate source) may thus have shown more creativity in using this Persoid borrowing than might initially be surmised.

The question then becomes whether Samarasiṃha got the word from a thencurrent North Indian language (which itself got the word from Persian) or from Persian directly. Words like  $dum\bar{a}l\bar{a}$  ("backside") do exist in New Indo-Aryan (that example is from Marathi), and there is a dum "tail/backside" in both Gujarati and Hindi. There, these words are very naturalized and not normally perceived as loanwords today, and there is a version of the root in Romani as well, which means that the borrowing must have taken place before the Romani exodus from India around 1000 CE.<sup>20</sup>

Given that Samarasiṃha's native language would have been some New Indo-Aryan language from the northern part of India, he may well have imported the word from his own spoken idiom. However, one would wonder why he would choose to do so in this specific case, instead of using the normal Sanskrit term *vakra*-, which he does on other occasions.<sup>21</sup> I would again suggest the most probable explanation to be that there was interference here from a Persian-speaking intellectual milieu, which acted as a sort of interpretational "middleman" for the relaying of the Arabic-language astrological tradition to Northern India.<sup>22</sup> These

<sup>19</sup> Exactly this phenomenon is attested in the Tājika term *ikkavāla*, "advance", from Arabic <sup>2</sup>*iqbāl* (on this word, see Gansten and Wikander 2011: 533 and Gansten 2020: 25). Note that this word also attests to the fickleness of the *a*-s inherent in the characters in terms such as this one.

<sup>20</sup> I would like to thank Aryaman Arora for an interesting discussion underlying this paragraph and for much of the modern data. I also owe the  $d\bar{u}r$  example in the next paragraph to him. For a Gujarati version of this word-family, see §ंधाद in Chandaria (2006), defining it as "the part that is behind, back" (translation by Aryaman Arora); for Hindi, see दुमबाल in McGregor (1993), giving "1. tail. 2. transf.

hind or rear part; stern; end. 3. rudder." For Marathi, see दुमाला in Molesworth 1857, giving, among other definitions, "[t]he hinder or back part." The Marathi and Romani examples (as well as others) can be found in Turner 1962–85: #6419. There, it is pointed out that it is probable that all Indian representatives of the root are Iranian borrowings, with the possible exception of the instance in Kalasha-Mon, which attests to an aspriated *bh*, suggesting an Indo-Aryan inheritance.

<sup>21</sup> The reading *vakra*- is in fact attested in a few later manuscripts, but this is clearly a *lectio simplicior* to be disregarded (thanks to Martin Gansten for this information).

<sup>22</sup> As argued already by Gansten and Wikander 2011: 545.

Persian-speaking exegetical middlemen would probably have used the  $dunb\bar{a}l$  word to explain a relevant Arabic passage, thus influencing Samarasiṃha's use of that terminology. One may compare with the modern Hindi use of the word  $d\bar{u}r$ , which is of Sanskrit origin but has its use reinforced by the existence of a close Persian cognate. This process – a foreign word reinforcing the use of a native (or, in this case, nativized) word for the same thing has been discussed by Zuckermann, with examples from Modern Israeli Hebrew. A similar phenomenon may, as we have seen, be in evidence in the case of ksuta as well – a spoken, explanatory word in Persian was heard by a speaker of an Indo-Aryan language, a speaker who deformed the latter word by forcing it into his/her own phonotactics and perhaps associating it with existing, native vocabulary.

### PHONOLOGICAL SUBSTITUTIONS RULES: PHARYNGEALS AND RHOTICS

A FTER DISCUSSING THESE TWO SPECIFIC WORDS, it may be fruitful to offer a few comments on the roads the various Perso-Arabic words in Tājika literature seem to have taken. On the one hand, there are, as we have seen, a number of appearances of the Persian-style pronunciation of  $t\bar{a}^{\sigma}$  marb $\bar{u}$  as -at. However, there is another interesting phonological trait in the Perso-Arabic Tājika terminology that merits analysis, viz. the non-exclusive but recurring rendering of the historical  $^{c}$ ayn phoneme as /r/ in a number of words. This is very hard to square with an exclusively Persian mode of transmission, as that language normally merged the  $^{c}$ ayn into a glottal stop. There are a few languages that use the  $^{c}$ ayn letter to represent a voiced uvular fricative or approximant (which could well have been interpreted as a rhotic by Indo-Aryan speakers), but this phenomenon occurs in languages such as Kazakh and Kyrgyz, which cannot reasonably be involved here. Thus, the only remaining logical explanation is that this rhotic rendering is actually an attempt to provide a substitution for the Arabic sound itself.

One of the cases in which (ultimately) Arabic <sup>c</sup>ayn is rendered as /r/ in Sanskrit astrological borrowings could theoretically be explained otherwise. This is the word *durapha*- (one of the *yogas* or planetary configurations), from

<sup>23</sup> Zuckermann 2003: 42, especially n. 48. I myself noted a probable instance of this process in the relationship between one of the Hebrew relative particles and a corresponding word in Akkadian (Wikander 2019: 10). 24 Other renderings include *y* (as in *yamayā*, from Arabic *jāmica*, "collection") and even a vowel /a/, appearing in *maṇaū*, which corresponds to Arabic *manca* ("prohibition") in the standard Arabic list of configurations known from Sahl ibn Bishr, but which would probably go back to

masculine (*al-*)*man<sup>c</sup>u*, with an un-nunated nominative ending, something that only occurs with this word in the list.

<sup>25</sup> See, e.g., Orsatti 2019: 42. On the early Persian-in-Arabic-script tendency to pronounce  $t\bar{a}^{\sigma}$  marb $\bar{u}ta$  as -at, see p. 50 in the same publication.

<sup>26</sup> Volga Tatar and Bashkir also use a voiced uvular fricative as their substitution for Arabic *cayn* (I would like to thank Sāmapriya Basu for pointing this out to me).

Arabic  $du^cf$  ("weakness"; the borrowing, by the way, again shows that some Sanskrit /a/ vowels in these words were, at least originally, only orthographic – dur[a]ph[a]-; the spelling also suggests that the Arabic /d/ phoneme, historically a lateral fricative, had its modern standard pronunciation, an emphatic [d°], in the underlying tradition). Here, it appears that the initial part of the word has been identified with the native morpheme dus-/dur- ("bad"), which could explain the /r/ by itself. That this morpheme was involved is indicated by the appearance of the Sanskritized rendering dus-phalinīkuttha- for  $duf^ca$  l-quwwa ("committing of strength"), indicating a kuttha- ("power, strength") which gives "bad fruit" (dus-phal-in- $\bar{\imath}$ ). Note that this latter rendering uses dus- for a different Arabic root with a different initial consonant (d instead of d).

However, there is clear evidence from the same list of planetary *yogas* that this identification with *dur*- is not the whole story. This is in the form of the configuration known in Sanskrit as *tambīra*- or *tamvīra*-, which is a borrowing from Arabic  $tab\bar{\iota}^c a$  ("nature").<sup>28</sup> In this word, the substitution of *cayn* with /r/ is very hard to get around.<sup>29</sup>

As for the reason for this /r/ rendering, one could think of a number of possibilities. One is a less-than-astute confusion between  ${}^cayn$  and  $\dot{g}ayn$  – the latter, representing a uvular fricative, could (as mentioned) easily have been interpreted as a sort of rhotic by Indian speakers. One may also note that, even though Persian normally just realized borrowed  ${}^cayn$ -s as glottal stops or zero, they still counted as full consonants metrically in Persian poetry, suggesting that they were somehow thought of as "pronounced" (if only theoretically so).  ${}^{30}$  As Orsatti has shown,  ${}^{31}$  Judeo-Persian texts in the Hebrew alphabet render the pharyngeal /h/ of Arabic words as simple h0 suggesting that originally pharyngeal sounds were not given a pharyngeal pronunciation. Thus, it stands to reason that the

<sup>27</sup> For this version of the word, see Gansten and Wikander 2011: 534, n. 15. As the Sanskrit etymologizing does not fit with the meaning of the *yoga*, one cannot help wonder whether it was influenced by an alternative interpretation of the underlying Arabic root *dfc*, the basic meaning of which is "push, repel" (cf. Lane 1863: 890) and thereby can also mean "expel", which could have been taken to mean "removal/elimination of strength."

<sup>28</sup> This is so even though it appears from the context that the Sanskrit word was subsequently "re-folk-etymologized" as an Arabic \*\*tamwīr, "act of moving back and forth." See Gansten and Wikander

<sup>2011: 545.</sup> 

<sup>29</sup> In fact, the folk-etymology (and the meaning derived therefrom) mentioned in the previous footnote would only have been possible *because* the pharyngeal was rendered as /r/.

<sup>30</sup> On this, see Orsatti 2019: 57.

<sup>31</sup> Orsatti 2019: 62. In later Judeo-Persian manuscripts, from the tenth and eleventh centuries cE (discussed on p. 63 in the same publication), <sup>c</sup>ayn is consistently rendered using Hebrew <sup>c</sup>ayin, but this may well be a purely mechanical transliteration scheme (cf. Orsatti's comments on p. 65). In the same way (p. 58), Manichaean Persian had a special <sup>c</sup>ayn sign.

borrower either confused the  ${}^cayn$  with a  $\dot{g}ayn$ , interpreting the latter as a uvular rhotic, or just created an "intrusive /r/" to keep some sort of pronunciation that corresponded to the original pharyngeal, much as the Persian poets seem to have done. The other, and less probable, possibility would be an extremely hit-and-miss attempt at creating some form of imitation of an actual  ${}^cayn$  uttered by a speaker of Arabic.

All this would again render credence to the proposition that the origin of the Perso-Arabic phraseology in Tājika was indeed just that: Perso-Arabic, probably based on Arabic sources, but sometimes (but not always) influenced by Persian speech. This, to be sure, says something about the social realities underlying the transmission, and shows that not only two languages were involved, but possibly as many as four: Arabic, Persian, a modern Indo-Aryan vernacular of the time, and finally Sanskrit.

# **ACKNOWLEDGEMENTS**

This article was written as part of my work as a Pro Futura Scientia fellow, funded by the Swedish Collegium for Advanced Study and Riksbankens Jubileumsfond. Much of the writing took place during my highly stimulating visiting fellowship at the Centre for Research in the Arts, Social Sciences and Humanities (CRASSH) and my stay at Wolfson College, Cambridge, during the academic year of 2021/2022. A great thank-you to Martin Gansten for his readthrough and suggestions.

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