āmikṣā and payasyā:
Processing of fermented milk in ancient India

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0. Fermented Milk in Ancient India: dádhi- and āţāncana-

We find various kinds of dairy product in Indian literature since the oldest religious texts known as Veda. Almost all products are processed based on dádhi which is produced by fermentation caused by lactic acid bacteria, dádhi is the old form of Hindi dahi. Fresh milk changes into dádhi through the activity of lactobacilli. Ancient Āryas knew how to ferment milk intentionally by means of a “starter,” which is called āţāncana-1) ‘coagulant’ in the Veda.

1. sāmnāyyā-, āmikṣā-, payasyā-

dádhi is not only an offering in itself, but also a material for some further products such as sāmnāyyā-, āmikṣā-, and payasyā-. Some scholars2) regard these words as synonyms, but this has not yet been verified.

1.1. sāmnāyyā-, Lit. ‘the putting together’

sāmnāyya is a mixture of dádhi with boiled milk (śṛṭā) used as an offering in the New Moon Sacrifice.3) dádhi is made of the milk milked in the evening of the preparatory day (upavasatha) and a coagulant added to it.4) śṛṭā is milked and boiled in the early morning on the day of the main sacrifice.5) They are mixed just before the oblation,6) so any visible change does not seem to be brought about by the functioning of lactic acid bacteria.

1.2. āmikṣā- ‘the mixing into’

āmikṣā, also, is a mixture of dádhi with śṛṭa (boiled milk) which are prepared in the evening on the day of preparation, and the early morning on the day of the main sacrifice, respectively.7) dádhi is, however, added into śṛṭa when it is boiling. Heat and acid have an influence on milk proteins and cause them to coagulate. Curd and a liquid separate out. The
former is āṃiksā, so that it seems to be something like a cottage cheese. The latter is called vājina, which could be whey.\(^8\)

1.3. āṃiksā and payasyā ‘belonging to milk’: A Legend of Dirghajihvi, Witch “long-tongued”

āṃiksā and payasyā could be the same products for some reasons: e.g. ① payasyā is made in the same way as āṃiksā; ② payasyā is associated with vājina (whey); ③ The milking for āṃiksā and that of payasyā are done via the same procedure.\(^9\)

Moreover, their identity will be shown in the legend of Dirghajihvi, Witch “long-tongued.” This legend describes the origin of payasyā and its outer appearance.\(^10\) In the KS version of this story, the concluding sentence refers to āṃiksā in the same context as payasyā.\(^11\) On the other hand, SB IV 2,5,18–19 [Agniṣṭoma, Savaniyapurodāśa] shows an opposite pattern of the KS, that is, the word payasyā appears in the discussion about āṃiksā.\(^12\) The KS and ŚB seem to regard the words as synonymous. Note that we can find the word “apūpa-” instead of purodāśa- in section 19. apūpa is no less a pancake made of unpolished rice or barley than purodāśa is. The latter appears just as an offering, whereas the former is an ordinary food. We could infer that there is the similar difference between āṃiksā and payasyā as that between purodāśa and apūpa.

2. Distribution of āṃiksā- and payasyā- in Veda

Furthermore, we find in the Caturmāśya chapter that all the Black Yajurveda schools describe āṃiksā as an offering for All-Gods (Viśve Devāḥ) in the Vaiśvadeva sacrifice and that for Marutās (± Varuṇa) in the Varuṇapraghāsa, although the White YV and Kauśitaki schools prescribe payasyā as the offering for the same deities in the same sacrifices (Table 1). Similar contrast could be found in the context of the Dākṣāyaṇa New-Moon sacrifice between the Taittiriya school of the Black YV and the Vājasaneyin school, i.e. the White YV. Among the YV schools, only the Taittirīyas and the Vājasaneyins transmit Dākṣāyaṇa sacrifice, which is a variation of the New- and Full-Moon Sacrifice. The former school seems to belong to a later layer in the conservative Black YV.\(^13\) The latter has a wealth of innovation in ritualistic interpretation and theological discussion. In other words, a gap of generation or ritualistic development seems to be reflected in the occurrences of both the words in the YV schools.
Table 1 āmikṣā and payasyā in Cāturmāsya and Dākṣāyaṇa

<table>
<thead>
<tr>
<th></th>
<th>Cāturmāsya, Vāisvadeva</th>
<th>Cāturmāśya, Varuṇapraghāṣa</th>
<th>Dākṣāyaṇa (New Moon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS</td>
<td>āmikṣā (Viśve Devāḥ)</td>
<td>āmikṣā (Maruts)</td>
<td></td>
</tr>
<tr>
<td>KS</td>
<td>āmikṣā (Viśve Devāḥ)</td>
<td>āmikṣā (Maruts)</td>
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<tr>
<td>TS/TB</td>
<td>āmikṣā (Viśve Devāḥ)</td>
<td>āmikṣā (Maruts, Varuṇa)</td>
<td>āmikṣā (Mitra–Varuṇa)</td>
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<tr>
<td>SB</td>
<td>payasyā (Viśve Devāḥ)</td>
<td>payasyā (Maruts, Varuṇa)</td>
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We could also observe this tendency in the whole of Veda. Inquiring into a distribution of these two words, āmikṣā and payasyā, through all the Vedic literature, we may observe that the later period the text belongs to, the stronger the tendency for payasyā to appear more than āmikṣā (Table 2).

Table 2 āmikṣā: payasyā the ratio of their occurrences

<table>
<thead>
<tr>
<th></th>
<th>Samhitā</th>
<th>Brāhmaṇa</th>
<th>Śrautasūtra</th>
<th>Others</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>RV</td>
<td></td>
<td></td>
<td>RV-Khila 0 : 1 (V 7,4,1)</td>
</tr>
<tr>
<td>Black</td>
<td>Maitrāyani</td>
<td>12 : 7</td>
<td>Māṇava 3 : 2</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Katha (Kap)</td>
<td>6 : 15</td>
<td>3 : 3</td>
<td>Lost Brāhmaṇa 1 : 0</td>
</tr>
<tr>
<td>White</td>
<td>Śānti</td>
<td>9 : 5</td>
<td>7 : 2</td>
<td>BaudhPitṛSū 1 : 0</td>
</tr>
<tr>
<td></td>
<td>ŚBM 4 : 32</td>
<td>Kātyāyana 3 : 11</td>
<td></td>
<td>Jaim-GrŚū 0 : 1</td>
</tr>
<tr>
<td></td>
<td>ŚBK 3 : 25</td>
<td></td>
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</tr>
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<td></td>
<td>Jaiminiya 6 : 2</td>
<td></td>
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<td></td>
<td>Pañcavimśa</td>
<td></td>
<td>Drāhyāyana 0 : 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Šaunaka 13 : 0</td>
<td>Gopatha 1 : 2</td>
<td>Vaitānasūtra 1 : 0</td>
<td></td>
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<tr>
<td></td>
<td>Paippalāda 13 : 0</td>
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</tbody>
</table>

(Shadowed: payasyā occurs more than āmikṣā; dash: no occurrence; diagonal: no transmitted text. Used e-text: VādhŚrŚū by Prof. Y. Ikari, Baudh- and ĀpŚrŚū by Dr. M. Fushimi, Āśv- and ŚankḥŚrŚū by Prof. M. Tokunaga.)

3. Conclusion

On the basis of these considerations, āmikṣā and payasyā seem to be the same, i.e., a
āmiṅśā and payasyā (N. Nishimura) (13)

curd made of fermented milk, whereas sāmnāyā is a pure mixture of fermented milk with boiled one. For the solution about difference between āmiṅśā and payasyā, some clues are found: First, we might infer that a feminine action noun āmiṅśā (‘the mixing into’ < ā-mikṣ) was qualified by addition of the adjective payasyā-, derived from payas- ‘milk’ and indicates that it deals with a dairy product, and that later, the adjective came alone to be used.¹⁴)

Second, I would like to point out a possibility that āmiṅśā or payasyā has a relationship with Soma Sacrifice. As I have already mentioned, occurrences of payasyā- are rather rare in the Black YV texts. Those occurrences are found in the chapter of Soma Sacrifice and Kāmyeṣṭi (Sacrifice for Wish). In the former, payasyā appears in the context of Prātaḥsavana (cf. 1.3.) and a set of five kinds of offering (Purodāśapaṅkti or Savaniya-purodāśa, cf. 1.3.) In the Trītyasavana (cf. n.12), they offer āśir, i.e., a mixture of milk with Soma juice. āśir- is a root noun from ā-śray/śrī ‘mix into’,¹⁵) and originally to have a similar meaning to āmiṅśā-. Further supposition brings us a hypothesis: āmiṅśā and āśir form a pair, the former ‘a mixture’ of milk with milk, and the latter of Soma with milk. Moreover, it might be the word payasyā- that emphasises both milk elements in āmiṅśā. However, we need to more examine about the relationship between āmiṅśā and āśir. In any case, the above mentioned would correlate with the process of compiling a ritual literature and ritualistic development, and could be linked with the Āryas’ expansion in the subcontinent with a shift of their nomadic lifestyle to the non-nomadic one.

¹ ) The fermented remnant of the Agnihotra offering is usually employed as ātaṅtcana. Agnihotra is a Vedic ritual held twice a day: in the evening and morning. Boiled milk is offered into the Āhavaniya fire. According to TS II 5.3.5–6⁹ and ĀpŚrś I 14.1–2, several species of plants are employed as substitutes for ātaṅtcana: kūvāla-kvāla- (Zizyphus jujube), tandemla- ‘unpolished rice or barley,’ parṇavalkā- (bark of Butea frondosa), and pūtkā- (probavely Caesalpinia bonduc. Roxb, cf. Kuiper “Was the pūtkā a mushroom?” Fs. Dandekar (Delhi, 1984), 219–227). I have to omit the result of the investigation into ātaṅtcana- for want of space.


³ ) sāmnāyā is regarded as an offering for Indra in the special New-Moon Sacrifice in the systematised framework of later Śrauta ritual. In the ordinary New-Moon Sacrifice, the pancake (purodāśa) for Indra-Agni became usual. Cf. Nishimura, Grazing cows and mowing the

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sacrificial grass—A study of the mantra collections of the Yajurveda-Saṁhitās and their brāhmaṇas—

4) MS IV 1,3:5-8-12: "sāmpryacchavham pāvvar ārminā mādhūmattamāḥ | pṛccatīḥ pāyasā pāyō | mandrā dhānasya sātaye (no parallel in the MS6) > iti, prātīnayati, śṛtatvāya, śṛtākāmā hi devā, ārdhāya tvā bhāgām sōmenātanacm, (11,3,2,10-11) ārdhāya tvā evāṁ karotī, tāsya ha tvai somapithih sāmātātā tvā evām vidvānt sāmāyāyam pibati. "[The Adhvaryu priest recites:]
>Mix yourselves (: waters) completely, O those who follow the cosmic law, with undulating [milk], [mix yourselves] as the ones having most honey, while mixing the [cows'] milk with the [grasses'] milk, as the pleasant ones for acquisition of property.> He adds [the water into the milk]. [It serves] for the state of having been boiled. For the gods are fond of what has been boiled. [He recites:] <For Indra, I coagulate you with Soma, as [his] portion,> [He] makes this one (: milk) into Soma (as a result of this recitation). His (: the sacrificer's) effect of drinking Soma, on the other side, is verily continued, if he, knowing thus, drinks sāmāyāya." ≈ KS XXXI 2, TB III 2,3; cf. BaudhŚrŚū I 3:5,7-10; ĀpŚrŚū I 13,10-11; 13-15; KātyŚrŚū IV 2,3,3 etc.

E.g. ĀpŚrŚū I 14,8: upadhāya kapālāni sāyamdohavat prātārdoham dohayati, | ātāncaāpif- dhānā niḥdhanam ca nivartate ... “After having set up the dishes (for the pancakes), [the Adh- varyu priest] makes [the milk] milk for the morning milking [in the same way] as the evening milking. Coagulating and covering up [of the milk pot], and putting down as well are omitted.”

6) ĀpŚrŚū II 20,3-4: samavādyā dohābhīyām [3] dadhno 'vadāya śṛtyāvadyatyat, etat vā vi- parītam. | sarvāṇi dravaṇī śrūmukkhenā juhoti. [4] “After having divided [both] together, [Adh- varyu priest deals] with both the milked. After having dividing out [a portion] of dadhi, he di- vides [a portion] of śṛtya. This [happens] alternatively in the opposite order. He offers all the liquids through the ladle’s beak.” Following texts show that both kinds of milk are kept separated until the oblation: BaudhŚrŚū I 14:22,3 madhyataḥ purodāśav āśādayati daksinataḥ śṛtam ut- tarato dadhī | "[Adhvaryu] places two purodāsas on the middle [of the vedi], the śṛta on the south, and the dadhi on the north"; cf. ĀpŚrŚū II 11,8-9.

7) ĀpŚrŚū VIII 1,9,16 aghin anvādhāya sākhām āhyāta vaiśvadevīyā āmikṣāyā vatsān api karoti ... 16. pūrvaved vaiśvadevīyāḥ sāyamdoham dohayati. “After having supplied [woods? in] the [three] fires [and] having brought the branch, [the Adhvaryu] separates the calves [from their mother cows for getting milk] for āmikṣā for All-Gods ... In the same manner as the former (i.e. sāmāyāya), [he] makes [the milk] milk the evening milk for [āmikṣā] for All-Gods.” Cf. Ein- noo, Die Cāturmāsya oder die altindischen Tertialopfer dargestellt nach den Vorschriften der Brāhmaṇas und der Śrutāsūtras (Tokyo 1988), pp.13f.

8) BaudhŚrŚū V I:129,2-3, 8-11: atottaratās tirah pavitra pavaya aniyāmikṣāyā adhiśrayati ... tirah pavitra pavaye dadhi āṇayati, sāmikṣā bhavati, tām ya eva kaś ca kuśalaḥ parin- dhena śrāpayitvā vivāhinām kṛtvaratāpe nidadhāti “Then, having poured the milk across [over] the purification [branch] northward, he puts [it] on [the sacred fire] for āmikṣā ... When the
milk is heated, he pours the dadhi into [it] across the purification [branch]. It becomes āmikṣā. Whoever even skillful, having boiled it with surrounding firewood and made vajina separate, settles on the place where it is not yet heated”; cf. ĀpSrŚ VIII 2.1.5–6.9. We find in MS I 10,6:146,6–11⁰ (~ KS XXXVI 1:68,7–11⁰; TB I 6,2,4–5⁰) that dadhi and śrta form a pair (mithunā-) and āmikṣā comes from the pair. According to the MS and KS, what one can see through (pari-dṛś, -paś) a liquid as something like an egg or mastu (sour cream?), is āmikṣā as an embryo.


10) MS III 10,6:138,6–7⁰: dirghajhivi vai devānām prātahsavanām āvālet, tād vyāmādyat, sā payasyābhavat, tasmāt payasyā vimādirūpeva, “Dirghajhivi, verily, licked off the gods’ morning pressing (Soma juice pressed and offered in the morning). That she, intoxicated, vomited. It became payasyā. Therefore, payasyā has just a vomitus’ appearance.” Cf. AB II 22.

11) KS XXIX 1:166,8⁰: dirghajhivi vai devānām yajñam avāled prātassavanam, tad vyāmādyat, sā payasyābhavat, tasmād āmikṣā vimādirīpeva, yat payasyā prātassavane bhavati prātassavanaṃsya samṛḍhayai. “Dirghajhivi, verily, licked off the gods’ sacrifice, [that is,] morning pressing. That she, intoxicated, vomited. It became payasyā. Therefore, āmikṣā is just like the vomited. That payasyā appears (is used) in the morning pressing, [it] is for perfect equipment of the morning pressing.”

12) ātha yat purodāśah | dhānāḥ karambho dadhy āmikṣetī bhavati yā yajñasya devatās tāḥ sūpirītā asann iti. ||18|| idām vā apūpaṃ aśītvā kāmāyate. | dhānāḥ khādeyaṃ. karambhām aśīyām. dadhy aśīyām. āmikṣāṃ aśīyāṃ iti. tē sārve kāmāḥ. yā yajñasya devatās tāḥ sūpirītā asann ity. ātha yād aśī prātahsavanāvā evā maitrāvarūṇaṃ payasyāvakītaḥ bhavati nēтарavyoh śāvanavah (19)

“Then, when purodāśa (pancake), dhānās (parched barley or rice), karambha (dough of barley), dadhi, and āmikṣā, such is applied, [one intends] that those who are deities of the sacrifice should be content sufficiently. 19. In this case, having eaten apūpa (pancake), one wants: “I want to chew (i.e. eat) dhānās, I want to eat karambha, I want to eat dadhi, I want to eat āmikṣā.” They are all desires. [It is intended] that those who are deities of sacrifice should be content sufficiently. Then, [the reason] why this payasyā for Mitra-Varuṇa is applied as [an offering] to be fit for the Prātahsavana, [and] not in both other Savanas (Mādhyandinasaavana ‘the noon Savana’ and Tṛtiyaśavana ‘the third, i.e. the evening Savana’) [that] ... (the explanation of the reason follows in section 20)” Following sections 20–22 mention the five offerings: purodāśa, dhānā, karambhā, dadhi, and payasyā. The texts which belong to the Black YV and the RV school have payasyā alike in the same context as the ŚB: MS III 10,5–6⁰: purodāśa/apūpa, parivāpa, dh., k., payasyā; KS XXIX 1³: dh., k., par., apūpa, payasyā; TS VI 5,11,4⁰: dh., k., par., purodāśa, payasyā; AB II 23,7: ājya, dh., k., par., purodāśa, payasyā; KB XIII 2: d., dh., saktu, purodāśa, payasyā. On the offerings made of grain, cf. ĖINOO, “Altindische Getreidespeisen” (Münchener Studien zur Sprachwissenschaft 44, 1985, pp.15–27).

13) NISHIMURA, Grazing cows (→ n.3), pp.43ff., 127–164, especially 145ff, etc.

14) payasyā- as adj. occurs, however, only two times in the Lātyāyaṇa- and DrāhyāyaṇaŚrŚu. Cf.
Pāṇini IV 3.160 gopayasor yat ‘as for go- and payas-, the suffix ya- [is applied]’: gavya-, payasya-. Cf. e.g. candrá- for candrá- mās- ‘bright moon (and not the month).’


**ABBREVIATION:** AV: Atharvaveda (Saunaka); AVP: Atharvaveda (Paippalāda); ĀprŚrŚ: Āpastambha-Śrutasūtra; AB: Aitareya-Brāhmaṇa; KapŚ: Kapiśthala-Kaṭha-Saṁhitā; KS: Kāṭhaka-Saṁhitā; KāṭhasaṁkhaŚ: Kāṭhakabrāhmaṇasaṁkharaṇa, Kūṃśaṁdabṛāhmaṇa; KātyŚrŚ: Kātyaśaṁna-Śrutasūtra; KB: Kauśitaki-Brāhmaṇa; GB: Gopatha-Brāhmaṇa; JB: Jaiminiya-Brāhmaṇa, TĀ: Taittiriya-Āranyaka; TB: Taittiriya-Brāhmaṇa; TS: Taittiriya-Saṁhitā; BhrŚŚ: Bhāradvāja-Śrutasūtra; BaudhŚrŚ: Baudhāyaṇa-Śrutasūtra; MānŚŚ: Mānava-Śrutasūtra; RV: Ṛgveda; RV-kh: Ṛgveda (khila); VSK: Vājasaneyi-Saṁhitā (Kāṇva); VSM: Vājasaneyi-Saṁhitā (Mādhyandina); Vād̐hŚrŚ: Vādhula-Śrutasūtra; VaikŚŚ: Vaikākhaṇa-Śrutasūtra; ŚB/ŚBM: Śatapatha-Brāhmaṇa (Mādhyandina); ŚBK: Śatapatha-Brāhmaṇa (Kāṇva); HirŚrŚ: Hiranyakesi-Śrutasūtra

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